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Cattle Ranching as a Cultural Ecology Problem in San Miguel County, New Mexico

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CATTLE RANCHING AS A CULTURAL ECOLOGY PROBLEM IN SAN MIGUEL COUNTY, NEW MEXICO

by

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INTRODUCTION

Studies of cultural ecology, the adaptations of the people of a culture to a given physical and social environment, have usually dealt with a single ethnic group in a single environment. This study is concerned with an unusual situation, two fairly distinct ethnic groups in a region with large areas of distinctly different physical environments. Other studies in cultural ecology have been made in areas where two or more cultural groups were present, as for example Barth's researches in southern Iran and West Pakistan,[1] and Freilich's study of Creole and East Indian peasants in Trinidad.[2]

San Miguel County, New Mexico, in the north central part of that state, is the locale of this study. The population is about two-thirds Spanish- or Mexican-American, in this study called Hispano, and one third Anglo-American, or Anglo. The physical environment ranges from the southern tip of the Sangre de Cristo range of the Southern Rockies to the higher parts of the Southern Plains. The specific mode of

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[1]Frederik Barth, "The Land Use Pattern of Migratory Tribes of South Persia," Norsk Geografisk Tidsskrift, Bind 17 (1959-1960), and "Ecological Relationships of Ethnic Groups in Swat, North Pakistan," American Anthropologist, 58, 6 (December 1956).

[2]Morris Freilich, "The Natural Experiment, Ecology and Culture," Southwestern Journal of Anthropology, 19, 21, 1963.

adaptation studied is cattle ranching. Recent studies by Bennett in southwestern Saskatchewan of this mode with less markedly diverse ethnicity and habitat have served as the principal inspiration for the research reported here.[3] Strickon's studies of Latin-American cattle ranching in the Argentine Pampas were also utilized, not only because cattle ranching was the mode of adaptation, but also because of the similar ethnic factor, Spanish-Americans.[4]

Strickon has defined ranching in the following manner:

> I define the ranching complex as that pattern of land use which is based upon the grazing of livestock, chiefly ruminants, for sale in a money market and which is characterized by control over large units of land, extensive use of that land, and extensive use of labor on the land. The adjectives 'large' and 'extensive' in the preceding sentence are relative to patterns of tenure, use, and labor by crop growers under the same environmental conditions and within the same level of sociocultural integration.[5]

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[3]John W. Bennett, "A Classification of Habitats, Economies, and Cultures," Memorandum No. 4, Saskatchewan Cultural Ecology Research Seminar, Washington University, March 1964; "Some Ecological Observations on Cattle Ranching," Field Memorandum, Saskatchewan Cultural Ecology Research, Washington University, August 1963; and "Synopsis of Research Program: April 1963," Cultural Ecology in Saskatchewan, unpublished dittoed paper, Washington University, Department of Sociology and Anthropology, 1963.

[4]Arnold Strickon, "Class and Kinship in Argentina," Ethnology, I, 4 (October 1962),pp. 500-515.

[5]Arnold Strickon, "The Euro-American Ranching Complex as a Cultural-Ecological Type," in Anthony Leeds and Andrew P. Vayda, editors, Man, Culture, and Animals- The Role of Animals in Human Ecological Adjustment. A symposium. (Washington, D.C.: American Association for Advancement of Science, 1965).

This definition is used in the present study without alteration and is a very close fit to what ranching, both of cattle and sheep, is in San Miguel County.

Steward is generally credited with originating the concept of cultural ecology, using it more as a tool of research than a subject to be studied in itself.[6] Earlier work in a similar vein was done by Wissler as far back as 1926.[7] Kroeber, in his major work on the cultural and natural areas of North America, in 1936, carried on this emphasis on the importance of the physical environment in limiting man's ways of life.[8] As more studies are done in the field of cultural ecology, what was formerly a method of research has become the major focus of these studies. Such is the case in the research here presented.

A great deal has been written about western United States cattle ranching, much of it revealing many useful insights and ideas, but most of the works have been of an historical and anecdotal nature, as for example Atherton's The Cattle Kings,[9] Osgood's The Day of the

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[6]Julian Steward, Theory of Cultural Change (Urbana: University of Illinois Press, 1955), pp.30-42.

[7]Clark Wissler, The Relation of Nature to Man in Aboriginal North America (New York, 1926).

[8]Alfred L. Kroeber, Cultural and Natural Areas of Native North America, University of California Publications in American Archaeology and Ethnology, No. 38 (Berkeley, California: University of California, 1939).

[9]Lewis Atherton, The Cattle Kings (Bloomington: Indiana University Press, 1961).

Cattleman,[10] Dale's The Range Cattle Industry 1865-1925,[11] U. S. Senate Document 199, The Western Range,[12] and a recent work, Sonnischen's Cowboys and Cattle Kings - Life on the Range Today.[13] The last book is particularly relevant to the present study, and may be used in whatever analysis the data presented here call for. However the book is openly and admittedly a counter-polemic to what Sonnischen and the Rockefeller Committee at the University of Oklahoma feel is a distorted and unfavorable popular image of American Cattlemen. It is hardly an objective study, and makes no pretense of being such.

All the works on the cattle industry cited above, in addition, scarcely mention New Mexico ranching, but are nearly completely concerned with areas to the east and north of that state. Also, generalizations in a social science sense are avoided as at least impolite.

Originally this study was concerned with the general decline of agriculture in northern New Mexico, particularly in the subject county. An article was published on this subject in 1964.[14] Then it

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[10]Ernest S. Osgood, The Day of the Cattleman (Minneapolis: University of Minnesota Press, 1929).

[11]Edward E. Dale, The Range Cattle Industry - Ranching on the Great Plains from 1865 to 1925 (2nd ed.,; Norman: University of Oklahoma Press, 1960).

[12]U. S. Senate Document, The Western Range, 74th Congress, 2nd Session, (Washington, D.C.: U.S. Government Printing Office, 1936).

[13]Charles L. Sonnischen, Cowboys and Cattle Kings: Life on the Range Today (Norman: University of Oklahoma Press, 1951).

[14]Thomas J. Maloney, "Recent Demographic and Economic Changes in Northern New Mexico," New Mexico Business, September 1964.

became obvious that, at least in San Miguel County, there was a general succession in land use from earliest European settlement in the late eighteenth century to the present. When it was learned that the principal advisor for this dissertation, John W. Bennett, was doing cultural ecology research among farmers and ranchers of the Canadian Plains, the present study was concentrated on the modern use of land in the county, commercial cattle ranching. The original proposal for this research, accepted by the faculty two years ago, limited the scope of this research to a naturalistic, non-problem-centered study of the cattle ranchers of both ethnic groups in three distinct physical environments.

When the data were collected, and analysis of them began, it became obvious that most cattle ranchers in the county were more conservative than ranchers familiar to me in Colorado, in surrounding counties of New Mexico, and even ranchers in the extreme eastern portion of the county, near the Texas-New Mexico border. Further, this conservatism was evident in comparing the adoption of new technology by San Miguel County ranchers with much greater adoption by the Saskatchewan ranchers Bennett has studied. Thus a problem did arise in the course of working over the field and library findings of this research. The data yielded a question, why are these ranchers so reluctant to adopt new technology. From this question others immediately follow. Ethnicity may be a factor, with Hispano culture well identified in the literature as more conservative in general terms than Anglo culture. Does the physical environment, particularly the sizeable decrease in annual precipitation in recent years, have anything to do with such technological conservatism? These came to be important questions in this research, although they were unknown factors at the time the research was proposed and the field work conducted.

The organization of this dissertation follows closely the gradual narrowing of the scope of the research. The four chapters following this one deal with the general physical and human conditions of the county. Since one of the original expectations of the research was that the physical environment, the habitat, would be an important factor in the adaptation of man to it, the county was divided into three very distinct and large zones, clearly differentiated by the interdependent factors of elevation, topography, annual precipitation, and vegetation. Chapter II describes the geography of these zones of the county in some detail.

The third chapter describes the human factor in demographic terms, and demonstrates the shifts in population from rural to urban, from farm to non-farm. The purpose of this aspect of the study is to show in non-economic terms evidence of the unsuccessful attempts of dry-farming homesteaders to utilize the land of the county for either subsistence or commercial purposes. The succeeding two chapters on the history of land use and crop production demonstrate even further the nonadaptiveness of intensive agriculture for the non-irrigated portions of the county, more than ninety percent of the land area of the county. Soil depletion from such farming and long-term decline in precipitation, as well as the hostile semi-arid environment, made this mode of adaptation massively unsuccessful. Farming homesteads rapidly were consolidated into more adaptive sheep and cattle ranches during the second quarter of the twentieth century. The trend to larger units of land continues, abetted by the large-scale purchasing of smaller ranches by non-commercial

hobby ranchers. Commercial ranchers cannot compete with these hobbyists for ranch lands and are today limited to utilizing only land they already possess or can procure leases on. Adaptation to deterioration of range in the past has been by acquiring more land. The larger the range, the more likely one has adequate rainfall and grass on some parts of it. Such cannot be done now with land costing twice its economically justifiable price. Improved technology is closely identified with the highly capitalized hobby ranches, and is not adopted by many ranchers partly because of its association with non-profit making operations.

Then follows a chapter showing the relationship of ecological zones, Mountain, Plateau, and Plains to cattle ranching. In a sense it is a test of an unstated hypothesis, that a more hospitable physical environment will have a more successful human adaptation to the environment. Thus, for cattle ranching, an area of high rainfall and dense grass, in this case the Mountain zone, should have the most prosperous ranches. The Plains zone, with sparse grasses and equally sparse rainfall, should have the least successful adaptation to the land using cattle ranching as the mode. A census of ranchers was made and is included in this chapter. In terms of size of operations, both in amount of land and number of cattle, the exact opposite of expectations was met. The best ranches are on the Plains, the poorest in the lush Mountain zone. Historical factors such as early settlement of the Mountain zone by many Hispano people of few resources, and late settlement on the Plains, often not until

the twentieth century, allowing consolidation of failing farm homesteads into large ranch holdings, counteract the geographic factor.

The next two chapters describe the economic and social aspects of ranch life, in that order. The chapter on economics shows the importance of cattle ranching in the county. Typical ranching operations are described, with both financial and technological aspects covered. Variations from such typical operations are touched on briefly, for much of the discussion of variations is given in the chapter on ethnic differences.

Social aspects of ranch life, ranging from settlement pattern and housing to family and friendship patterns, transportation, politics, religion, education, relations to public media of communications, are found in Chapter VIII. Again, the typical pattern is presented here, with elaboration of ethnic and other differences reserved for the next chapter. It is in these social factors that ethnicity plays an important part, as that chapter shows. Because it is impossible to discuss meaningfully the social life of ranchers without taking into account differences between Hispano and Anglo, some overlapping between this and the succeeding chapter is inevitable.

One of the crucial aspects of this research is the influence of ranching as the economic mode of adaptation to the environment to the culture of the people involved. Chapter IX attempts to present the effect of ranching upon the life of ranching families, in the course of a discussion of ethnic differences in ranching. Cultural differences are discussed, both in terms of the general population and ranching people. The difficult task of demonstrating the existence of

two distinct ethnic groups is attempted. Then, without repetition of more of the material on the technical aspects of ranching than necessary, the "cultural core," those aspects of a culture tightly bound to the mode of adaptation, is described. Ethnic variants of this core are presented, followed by a discussion of the influence of the economic activity in determining core and non-core culture as compared to the influence of what Freilich terms "historical factors."[15] From this discussion it seems clear that both ethnic groups are more affected by their cultural backgrounds, their histories, than by the environment or by their attempts to adapt to it. The present study, like few others, allows the testing of the relation of culture to environment, with two ethnic groups in the same set of environments.

The final chapter of this work is an attempt to explain the problem that has gradually evolved as this research has progressed, the adherence of ranchers of both ethnic groups to conservative technology when it appears that changes in adaptive practices are clearly called for. There are many factors making for this conservatism, by no means all related to ethnic identity. While there are no innovating Hispano ranchers, most Anglo ranchers also continue with traditional technology, Hereford cattle grazed year-round on native grasses on operator-owned land, producing an annual calf crop sold off in the fall of each year. In the face of an environment that is usually hostile, but particularly so with depleted grasslands and lower rainfall in the past twenty years,

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[15]Freilich, op. cit.

changes in the adaptive mode to more efficient, more survival-assuring technology are resisted. The presence of progressive ranchers in the easternmost section of the county, on some of the poorest land, only points up the conservatism of most ranchers. By comparing these eastern ranchers with others, some of the determining factors become apparent. It is not simply a matter of the environment throwing up a greater challenge in the dry eastern Plains zone, in a Toynbeean sense. There is a multiplicity of factors, somewhat different for the two ethnic groups, but leading to the same result, a stubborn adherence to the tried-and-true, traditional mode of operation. Far from the economic activities centered around cattle raising determining the life of the people, the matter is turned on its head. Other factors in the culture, for most ranchers, determine how a man goes about seeking adaptation to the environment.

It should be stated early in this study that this researcher had no opinions or information on this subject before beginning the research. He is of urban origins and his previous ethnographic experience has been among the Indians of Zia Pueblo, also in New Mexico. Hopefully whatever biases he might have held on cattle ranching and ranchers, Hispano, Anglo, or other, were held in check by attempts to maintain the objectivity and relativism inherent in good ethnographic field methods. The study has no special pleading in ethnic or economic terms, as has so much written about northern New Mexico. Although success may not have been complete, what was aimed for was only a description and analysis of the cultural ecological problems cattle ranching presents in a variety of social and physical en-

vironments in the subject county. It is hoped that these objectives were attained in this research.

CHAPTER II

GEOGRAPHY OF SAN MIGUEL COUNTY

In any ecological study a consideration of the habitat is essential. Research into human adaptation to the environment assumes a knowledge of such geographic factors as vegetation, topography, and climate. In this chapter is presented a description of the physical environment of San Miguel County. In addition, both regional variations, different zones, and chronological changes, basically in rainfall, are presented. These are considered more for their significance to human habitation than for mere description. Particularly important for a cultural ecology study may be the changes over a period of time that would be expected to demand corresponding changes in man's methods of survival in the environment. With decreased annual precipitation, the range grasses decline. For a man to remain in ranching today, on a fixed land base, means that he must alter his methods, his technology, or face eventual elimination from ranching as an economic activity. Thus a knowledge of the environment, particularly the changes in it in time, is basic for an understanding of human activity on the land.

That most ranchers in the county seem unable to make the changes called for is a crucial problem in this research. Partially, the problem is that most ranchers do not perceive any permanent change in the environment that affects their operations.

General Description

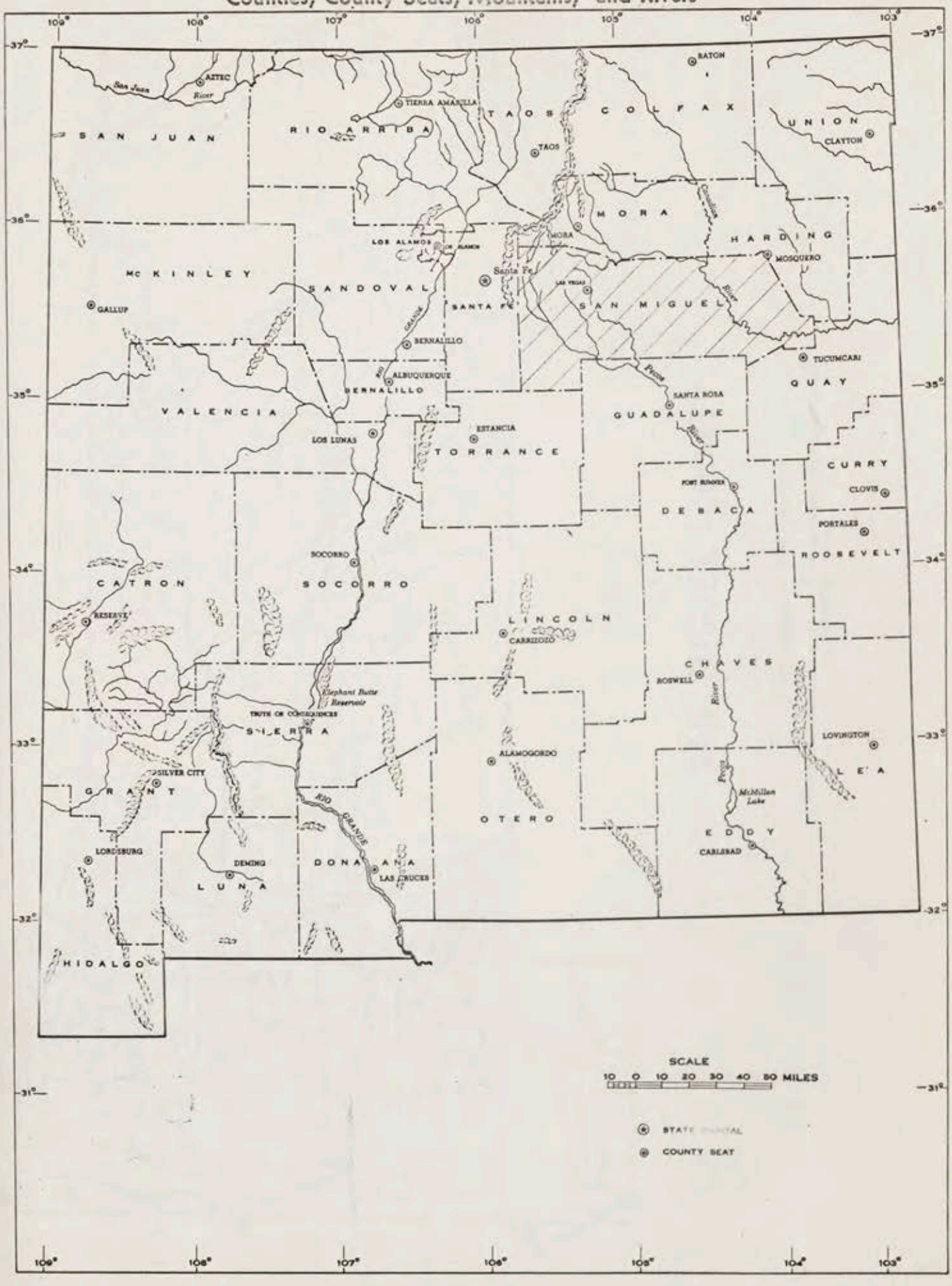
San Miguel County is located in north central New Mexico in the

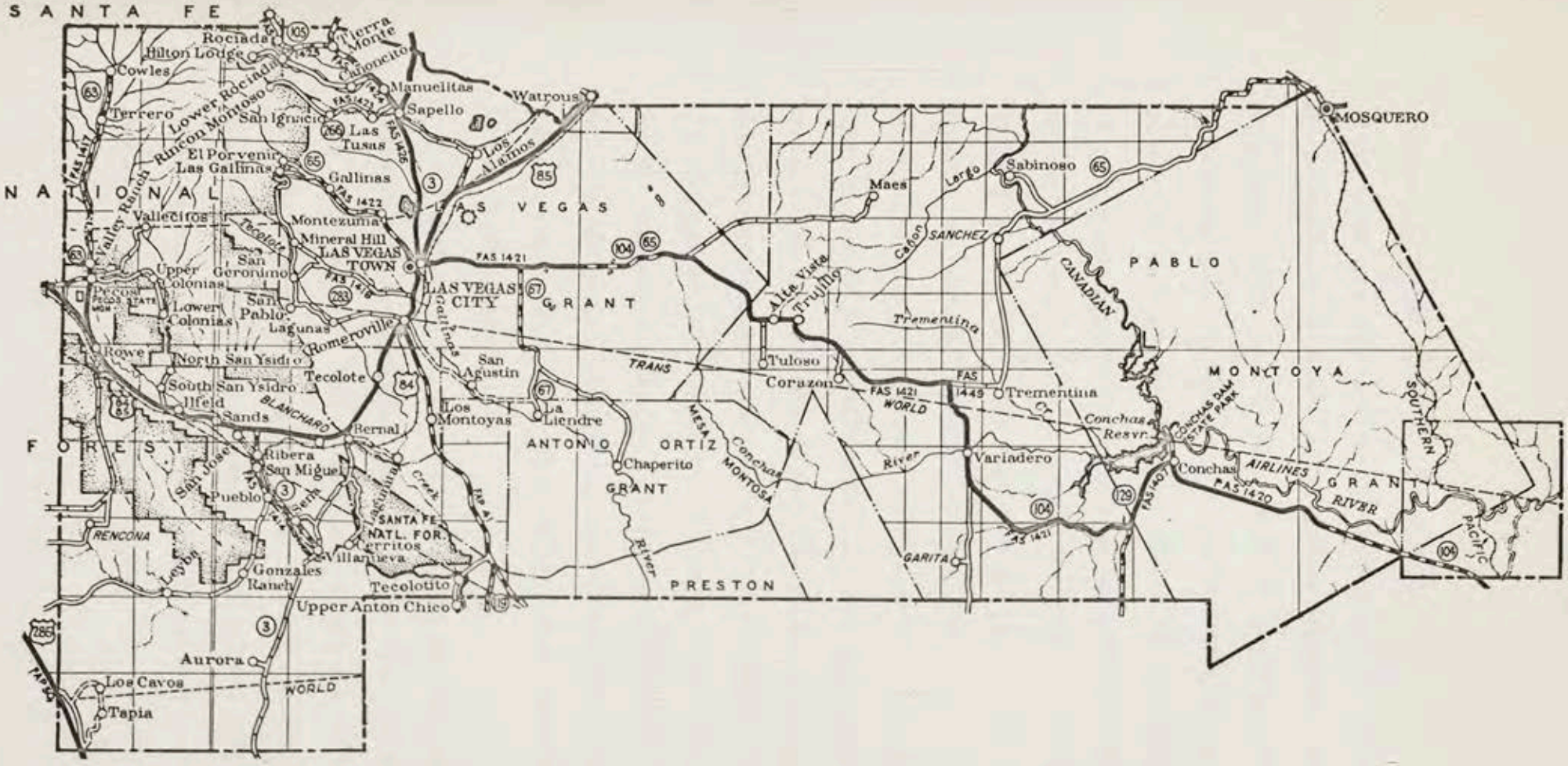
United States. It extends from 103°38' to 105°43' West Longitude, with the northern boundary approximately 35°48' North Latitude and the southern boundary for all but the westernmost twenty four miles at 35°13'. The southern boundary of this western section of the county is 35°03' North Latitude, and the northern boundary of this same area slightly north of that of the rest of the county, at 35°53' N. The county is thus essentially rectangular in shape, with irregularities in form on the western and eastern extremities. See the accompanying general maps of the county, and state, Figures I and II. Overall, the land of the county slopes gradually to the southeast from the Sangre de Cristo Mountains in the northwest.

The county is among the largest in modern New Mexico, but it was actually much larger in past times. In the early Territorial period it extended the full east-west length of the original New Mexico Territory, across all of New Mexico and Arizona, and was also wider in its north-south dimension. Its size was reduced through the creation of other counties and the division of the Territory into two states. Today the total land area is 3,039,360 acres or 4,749 square miles. Viewed primarily as a rectangle, the county can be said to be about forty miles wide, from north to south and one hundred twenty miles long, east to west, a large political unit even by western standards.

The county's location in relation to major political divisions, states and better known counties helps give some understanding to San Miguel County's history and economy. It is located about one hundred miles south of the Colorado-New Mexico border, extending

Figure 1


NEW MEXICO
Counties, County Seats, Mountains, and Rivers
SAN JUAN
RIO ARRIBA
TAOS
COLFAX
UNION
MORA
HARDING
MCKINLEY
SANDOVAL
SANTA FE
SAN MIGUEL
VALENCIA
BERNALILLO
TORRANCE
GUADALUPE
QUAY
CURRY
DE BACA
ROOSEVELT
CATRON
SOCORRO
LINCOLN
CHAVES
SIERRA
GRANT
OTERO
EDDY
LEA
LUNA
DONA ANA
HIDALGO
AZTEC
TIERRA AMARILLA
TAOS
RATON
CLAYTON
LOS ALAMOS
MORA
MOSQUERO
Santa Fe
LAS VEGAS
GALLUP
BERNALILLO
ALBUQUERQUE
TUCUMCARI
SANTA ROSA
LOS LUNAS
ESTANCIA
PORT SUMNER
CLOVIS
PORTALES
SOCORRO
RESERVE
CARRIZOZO
ROSWELL
Elephant Butte Reservoir
TRUTH OR CONSEQUENCES
SILVER CITY
ALAMOGORDO
LOVINGTON
McMillan Lake
LORDSBURG
DEMING
LAS CRUCES
CARLSBAD
Rio Grande
San Juan River
Canadian River
Pecos River
Gallinas River
SCALE
10 0 10 20 30 40 50 MILES
STATE CAPITAL
COUNTY SEAT


SANTA FE
NATIONAL
FOREST
Rociada
Hilton Lodge
Cowles
Tierra Monte
Canoncito
Manuelitas
Watrous
Sapello
Terrero
Lower Rociada
Rincon Montoso
San Ignacio
Las Tusas
El Porvenir
Las Gallinas
Gallinas
Los Alamos
Valley Ranch
Vallecitos
Montezuma
Mineral Hill
LAS VEGAS TOWN
LAS VEGAS CITY
LAS VEGAS
GRANT
Tecolote
Upper Colonias
San Geronimo
Pecos State Mon.
Lower Colonias
San Pablo
Lagunas
Romeroville
Rowe
North San Ysidro
South San Ysidro
Tecolote
San Agustin
Ilfeld
Sands
Bernal
Los Montoyas
La Liendre
ANTONIO ORTIZ GRANT
Ribera
San Miguel
San Jose
Pueblo
Chaperito
Mesa Montosa
Conchas River
Variadero
Conchas
AIRLINES GRANT
RIVER
SOUTHERN PACIFIC
SANTA FE NATL. FOR.
Villanueva
Gonzales Ranch
Tecolotito
Upper Anton Chico
PRESTON
RENCONA
Leyba
Aurora
Los Cavos
Tapia
WORLD
Maes
Sabinoso
MOSQUERO
Cabon SANCHEZ
Largo
Alta Vista
Trujillo
Trementina
Tuloso
Corazon
PABLO CANADIAN
MONTOYA
Conchas Resvr.
Conchas Dam State Park
GARITA
TRANS
FAS 1421
FAS 1422
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eastward to within 33 miles of the Texas-New Mexico border. Immediately to the north are Taos and Mora Counties, and to the west Santa Fe County, and to the south Torrance and Guadalupe Counties. Santa Fe, the state capital, is about sixteen miles west of the west boundary of the county, and Albuquerque, the trade and economic center of the state, is twenty three miles west of the southwest corner of the county.

The major population centers of northeastern New Mexico are mainly outside the county, but Las Vegas, the county seat, with a population of about 14,000, is in the west central part of the county. It was formerly the largest community in the state, the chief center of trade for the whole of northeastern New Mexico and Panhandle Texas, but today it serves as a trade center for only the western half of the county. The eastern half of the county uses Tucumcari in Quay county, bordering the eastern tip of the county, as a shopping and shipping center. Santa Fe and Albuquerque are the major trade centers for all northern New Mexico. Taos, one of the oldest European settlements in the north, is located some seventy miles north of Las Vegas and in no way serves as a trade or political focus for the population of San Miguel County.

In general terms, the climate of the area corresponds to variations in topography. The central portion has an elevation of from 5,000 to 7,000 feet and has a mild climate, with semi-arid conditions. The eastern third is typical High Plains country, with the dryness and temperature extremes typical of the Southern Plains of North America. The western third is mountainous, with greater precipitation and generally cooler climate than the middle third. It

is also heavily forested with conifer and aspen trees. No other county in the state, and perhaps in the whole Rocky Mountain region, has such variations, clearcut in most aspects, of climate, topography, and vegetation.

Changes in Climate

In any discussion with long-time inhabitants of San Miguel County, the subject of long-term changes in the weather eventually comes up. Discounting some of such conversation as excuses for improper agricultural management and changes in national and international economic situations affecting agriculture, there is still clearly something of possible relevance here. In order to determine possible changes in climate, data on weather at Las Vegas, formerly a center of dry farming in the county, were analyzed.

Figure 3 shows the variations in annual precipitation at Las Vegas. The average annual precipitation from 1887, the beginning date for continuous observations of weather by the U. S. Weather Bureau, through 1946 was 17.80 inches, with a variation between 10 and 25 inches the common pattern. Since 1946, for the period 1947 through 1960, the average annual precipitation has dropped to 14.25 inches, and the range has been from about 10 inches a year to only 21 inches.

The variation, the dramatic decline, is even more sharply shown by including precipitation since 1960, with the average annual dropping to 14.0 inches of precipitation for 1950 through 1964. There seems little doubt that Las Vegas is becoming drier.

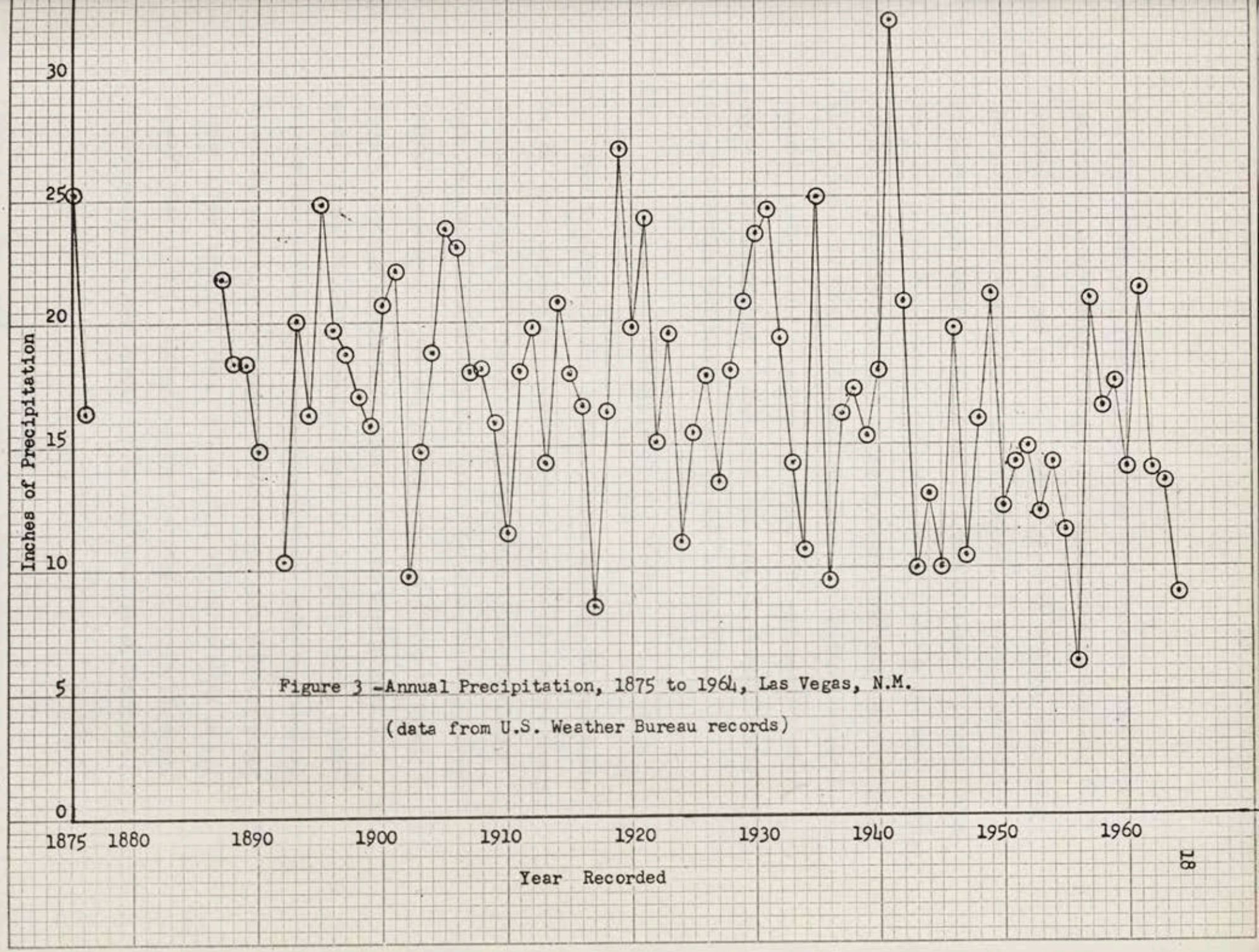

Figure 3 -Annual Precipitation, 1875 to 1964, Las Vegas, N.M.

(data from U.S. Weather Bureau records)

Crop failure has been great, to the point where virtually none of the land outside a few thousand acres of irrigated land is even used for crop raising. Even the grasses, many resistant to drought, have shown poor growth even without heavy grazing, apparently because of the lower moisture available. Although the long-term averages of precipitation for other parts of the county vary considerably from the Las Vegas average, all except possibly a few high in the mountains have shown equally drastic decreases in annual precipitation. Crop farming is no longer a business in the county, even for hay crops. The agricultural lands are used for grazing cattle and sheep, and even these lands are not the good grazing land they are reputed once to have been.

Transportation and Rivers

Even though the county is large, there are very few good roads in it. U. S. Highway 85 crosses the northwest portion of the county, linking Las Vegas with Santa Fe and Albuquerque to the west, and Raton, New Mexico and the major cities of Colorado, Pueblo, Colorado Springs and Denver, to the north. This route will soon be superceded by Interstate Highway 25. The only other main highway is State Highway 104, only recently paved for its full length, which extends west to east across the county from Las Vegas to Tucumcari. An extension of this route northwestward, also only recently paved, connects Las Vegas with Taos. Essentially, all other roads in the county, whether state highways or county roads, are unpaved, some in good condition, many barely a set of pick-up tracks along un-

graded and eroded trails. The highway network is shown in Figure 2, the county map.

Until a few years ago, the county was served by three railroads. The Santa Fe Railway's main line runs parallel to U. S. 85 across the west central part of the county. The Rock Island railroad runs just south of the county line, serving the southeastern parts of the county. This has been particularly important for the large commercial cattle ranches located in the southeast, and is one factor in the development of many ranching operations there. The third railroad, torn up only in the past three years, a branch of the Colorado and Southern, traversed the whole eastern border of the county, joining the Rock Island at Tucumcari, and in the north joining the Santa Fe railroad just south of Raton, below the Colorado-New Mexico border.

At the time all three railroads were serving the county, there was no point in the county more than thirty miles from a railroad. The abandonment of the Colorado and Southern tracks gives a hint of the shift from rail to truck shipment of cattle and sheep into and out of the county. As will be noted later, cattlemen have been dissatisfied with rail service and facilities for several years, which at least involves the problem of trans-shipment of cattle from range to truck to cattle cars. The major cattle and sheep producing area of the county, the Plateau and Plains areas, were well served by this triangle of railroads.

Finally, two major western rivers flow through the county. The Pecos River has its headwaters in the mountains of the western part of the county. This river flows the north-south width of the

county in a southeasterly direction from the northwest corner to the south central border. Most of the water in the perennial stream is used by small-scale farmers of the Hispano villages of the county, including Pecos, Ribera, Sena, Pueblo, Villanueva, El Cerrito and Tecolotito. The waters of this river are of little use to cattle and sheep herders of the area, with only a small amount of irrigated pasture and hay-growing land.

The Canadian River, while it has one perennial tributary entirely in the county, the Sapello, and another, the Mora, partly in the county, rises far to the north of San Miguel County in the mountains of the Cimarron area, east of Taos. The Canadian flows into the north central section of the county in spectacular canyon country, but turns abruptly eastward at the site of Conchas Dam and Lake, to flow out of the county at its easternmost point. Conchas Dam is of little use to farmers and ranchers of the county, since all irrigation water is channeled south into the Tucumcari area where large irrigation projects growing wheat, sorghum, hay, peanuts, and other cash crops are located.

The county is thus a watershed, providing water and the accompanying silt, to downstream areas, in New Mexico, Texas and Oklahoma, and Mexico. In fact, the central part of the county, the Plateau area, acts as a divide between the waters of the county flowing into the Pecos and those flowing into the Canadian. There are many intermittent or ephemeral streams in the county, all carrying water during heavy rains to one of these two main streams. Surface water and springs are not exclusively depended upon for most livestock oper-

ations. Windmills do this function for many ranches, so that the presence or absence of water in both the main streams and their tributaries is not of great importance to most ranchers.

Physiographic Divisions of the County

It was noted earlier that San Miguel county has a range of natural areas of markedly different characteristics such as very few counties do. Of course this is partly a matter of the size and the elongated shape of the county. Perhaps the simplest method of dividing the county would be into what some biologists, particularly botanists, call "life zones." Conference with Robert Lindeborg, biologist at New Mexico Highlands University, has discouraged use of this "life zone" concept. It is not seen as applying satisfactorily to San Miguel County.

The U. S. Weather Bureau, through the New Mexico State climatologist; has devised a method of dividing the state into areas having similar climates. In private correspondence with the State climatologist, this official admitted that the Weather Bureau's division could be modified to take into account important local variations in San Miguel County. Taking the Bureau's area divisions literally, the following are found in San Miguel County:

a. Northern Mountains
b. Central Highlands
c. Northeastern Plains
d. Southeastern Plains

Only the southwestern corner of the county is located in the Weather Bureau's Central Highlands area. An equally small area just east of this, centered around the lower part of the Pecos River valley, is

classed as Southeastern Plains. The remainder of the county is thus divided between the Northern Mountains and the Northeastern Plains, with approximately equal area for each. Figure 4 shows the Weather Bureau divisions.

The State Climatologist agreed that the lumping of high grasslands and woodlands, referred to in this dissertation as Plateau, with the hill country and high mountains and valleys of the Sangre de Cristo range could be modified to give a clearer picture not only of climatic, but also of geological and biological gross variations. The principal criterion for drawing a dividing line between Plains areas and the Mountains and Central Highlands areas appears to be elevation, namely the 6,000 foot altitude contour line.

A strictly geological division of the county into areas of distinct differences[1] was found after an original formulation was made for this research based on the Weather Bureau's divisions, vegetation zone maps, annual average precipitation isohyets (furnished for this research by the Weather Bureau), and 1,000 foot contour intervals on topographic maps. Harley divided the whole area of northeastern New Mexico into three zones, as follows:

a. Mountain (over 7,000 foot elevation)
b. Plateau (5,000 to 7,000 foot elevation)
c. Plains (less than 5,000 foot elevation)

This arrangement corresponds almost exactly to the division made

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[1]George T. Harley, The Geology and Ore Deposits of Northeastern New Mexico, New Mexico School of Mines, Bulletin No. 15, 1940.

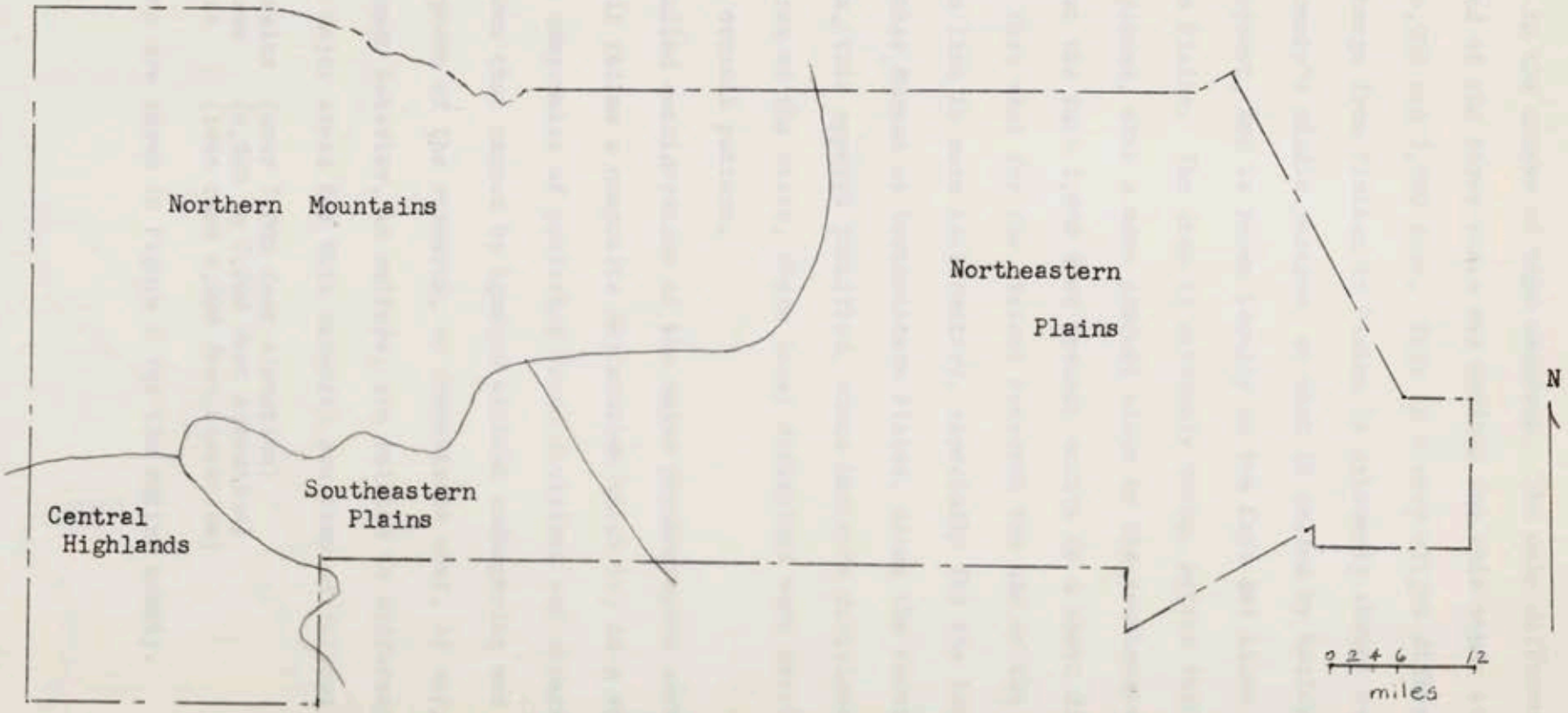

Figure 4 - Climatological Zones of San Miguel County, N.M.
according to U.S. Weather Bureau

independently in the course of this research. The only difference is that the second of the three zones was defined for this study as the area between 6,000 and 7,000 feet. This is a very slight difference because the change from Plateau to Plains is extremely abrupt over much of the county's middle portion, at what is called by Harley the Canadian Escarpment, and is known locally as the Ceja del Llano or Eyebrow of the Plains. The drop is extremely steep, better than 1,000 feet in many places, with a more gradual slope on the southeastern border, so that the full 2,000 foot descent occurs in a short distance. It is felt that for the present research the use of the 6,000 foot elevation line is more satisfactory, especially for the land classed by the Weather Bureau as Southeastern Plains, along the Pecos valley. Again, this appears justified, since Harley's divisions are for a large area of the state, where local variations were overlooked in seeking an overall pattern.

Thus detailed consideration of the major physiographic areas of the county will follow a composite delineation which is, in a very real sense, a compromise of published broad divisions and observed local variations that cannot be ignored without endangering one of the major purposes of the research, to demonstrate what, if any, differences in human behavior, in culture, are related to differences in habitat. The major areas for this research are then as follows:

a. Mountains (over 7,000 feet elevation)
b. Plateau (6,000 to 7,000 feet elevation)
c. Plains (less than 6,000 feet elevation)

These divisions are shown in Figure 5 for the entire county.

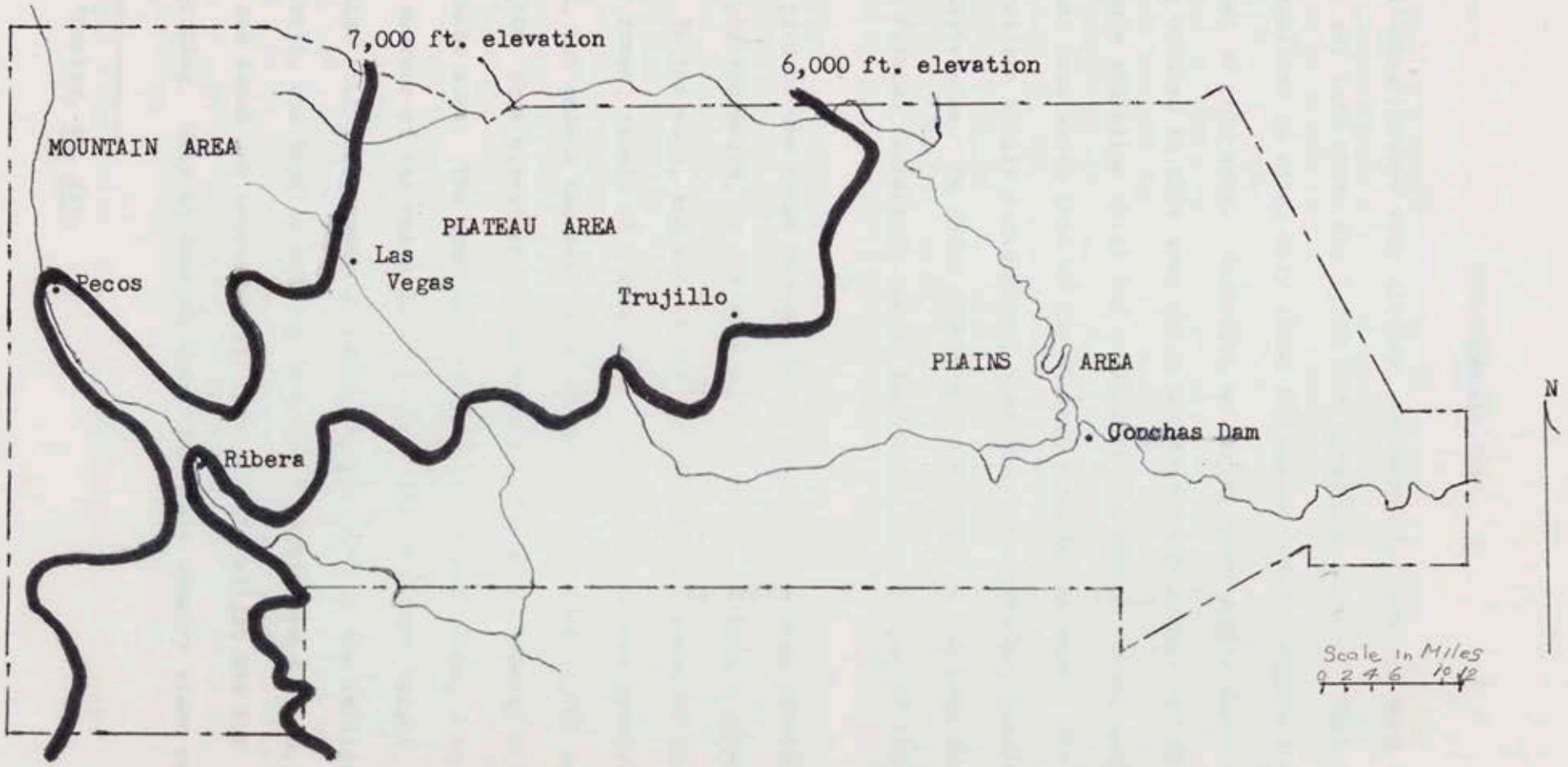

Figure 5 , Major Physiographic Areas of San Miguel County, N.M.

The Mountain Area

Following Harley[2] very closely, the Mountain Area has been defined as all land above the 7,000 foot elevation contour. This area is the smallest in size, only about 870 square miles. Figure 8 shows the extent of this area. According to Harley three major lines of faulting occured in this area which had previously arched and folded into a huge anticline which had a pitch to the south. These movements raised the area above that of the Plateau area to the east. The structures are mainly sedimentary, including pre-Cambrian, Mississippian, and Pennsylvanian. No later formations are found in the true mountains, but some Permian formations can be seen along the fringes of this area.

At present the Pecos Divide, as it is called, a high plateau that slopes southward, is cut by the Pecos River, forming a growing canyon. To the west, and out of the county, are the peaks of the Santa Fe range, result of a faulting. The plateau slopes gradually westward, but endsin the east in an abrupt descent from 11,000 to about 8,000 feet elevation in the Rociada, Porvenir, Mineral Hill-San Geronimo area. The mountains east of this steep slope, a result of another of the three major faults, are of modest height, and combine with deep gorges of small streams such as the Gallinas, the Porvenir, the Sapello and the Tecolote to make a very rough, conifer and scrub oak covered hilly area of only slight use for cattle grazing. Only at Rociada does this hilly country widen out

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[2]Harley, op. cit.

into a broad meadow of use for farming and grazing.

The dominant figure of this Mountain area is thus the Pecos Divide, the southeast end of the uplift known as the Sangre de Cristo range. Water to the west of the escarpment flows into the Pecos directly, and water to the east, from the foot of the escarpment, flows into the Pecos by way of the Gallinas and the Tecolote on the south, and into the Canadian via the Sapello and Mora, on the north.

No study has been found characterizing the various forms of plant and animal life of this mountain area except in the most general terms, such as "forest," or "coniferous forest." These are over-simplifications, giving little indication of changes with altitude and other variations. At about 7,500 to 8,000 feet vegetation changes from fir and spruce, with some ponderosa pine above this level, to pine, pinon, juniper, and willow below. There are typical western mountain intrusions of aspen in denuded sections of the high altitude fir and spruce forests. As one comes down out of the mountain area, such as in Gallinas canyon, west of Las Vegas, the hills and canyons broaden, and trees are shorter, scrub oak appears on the south slopes of the low hills Harley calls the Las Vegas Mountains and the Mora Mountains, and there is very little grass beneath the trees, all growing in a very coarse soil made from recently decomposed rock.

The most valuable local variation of vegetation within the Mountain area is the open grasslands of the Pecos Divide. Although there is no part of San Miguel county that is above timberline, these grasslands are very close to this elevation, being mostly above 10,000 feet high. Intrusion or invasion by conifers, or aspen, if

it is happening at all, is very slow. These meadows are the habitat of many wild animals, most obvious being elk and mule deer. Most of the high area of the Pecos Divide is covered by such high meadow. In past years, before the area became a part of the National Forest in 1907, there were summer ranches operating in this area. The big game was driven out, the elk herd killed off, and cattle and sheep used this land for a rich summer pasture. Today the elk herd has been re-established, but a herd of wild horses, remnants of work herds of the old ranches, still competes with the elk and deer, and the few cattle permitted by Forest authorities, for the good pasture.

All in all, the Mountain area, while having great recreational, mining and timber potential wealth, is not a base for commercial cattle industry. Many of the allotments for grazing are for 10 to 20 head of cattle, and can only be used for something like subsistence herds of cattle, enough to keep a family in tough range beef for a year with perhaps a few dollars income from sale of excess calves. The largest grazing permit for 1964 was for 100 head of cattle, and this was not used. The majority were for less than 20 head.

Reflecting the low economic value or usage of the Mountain area is the number and condition of roads in the area. As is typical of Rocky Mountain areas, the main roads are in canyons, along the creek beds. A well-graded gravel road follows the Pecos River northward from the village of Pecos to the border of the Wilderness Area, and a few Forest Service roads, all dead-ends, branch off from this. These are used mainly by hunters, fishermen, and campers, but also by the few cattlemen who truck small herds into the area under their grazing per-

mits. There are roads following the Tecolote, Gallinas, Porvenir, and Sapello rivers back westward to within a few miles of the Pecos Divide, with small settlements at or near the ends of each road. These are not as well maintained as the Pecos road, and one at least, the Tecolote valley road, is impassable in wet or snowy weather, leaving villagers at Mineral Hill and San Geronimo isolated in February, 1964 for nearly a week.

Annual precipitation in the area, shown in Figure 6, is higher than in the two eastern areas, but land useful as pasture is limited by the hilly and wooded nature of the terrain. At Rociada the long-term average annual precipitation is approximately 22 inches. At Tererro, well into the high Pecos country, the average is even higher, over 24 inches. As one traces the precipitation eastward, toward lower elevations and more open country, away from the Pecos Divide, the figure drops, until at Las Vegas the long-term average is about 16 to 17 inches a year.

The Plateau Area

This area of about 1,680 square miles has great uniformity. In delineating the Plateau area it has not seemed justifiable to adhere strictly to Harley's[3] division. The rationale for this was presented in the foregoing discussion of the major physiographic divisions of the county. The major part of the county excluded by the new division is the region east of the Pecos River having an

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[3]Harley, op. cit.

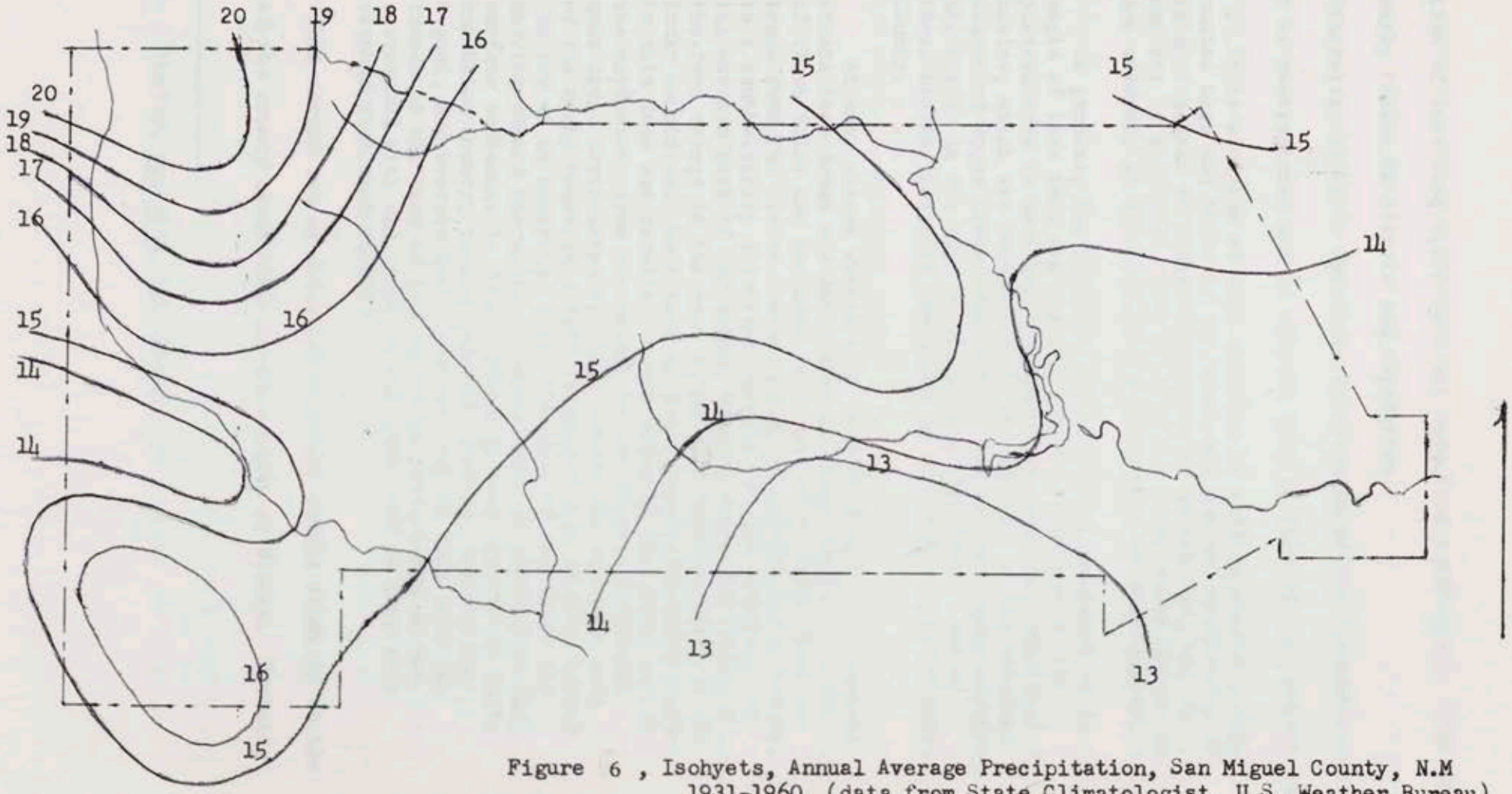

Figure 6 , Isohyets, Annual Average Precipitation, San Miguel County, N.M
1931-1960 (data from State Climatologist, U.S. Weather Bureau)

elevation of less than 6,000 feet but more than 5,000 feet. This area is clearly Plains in climate and vegetation.

Otherwise, Harley's excellent description of the Plateau Area cannot be contradicted and is adopted here as that of the present study.

> . . .It is a region of high expanses or rolling country, surmounted here and there by low mesas and buttes, consisting of residual masses of younger sediments of Benton age, and the remnants of once vast flows of basaltic lava, which appear to have covered, at one time, the greater part of this region.
>
> In general, the regional dip is to the southeast at an angle of less than one degree, but the structure of the plateau area is modified by three wide, shallow, synclinal basins, which are recognized on the surface by the residual masses of Upper Cretaceous beds of Benton age, which occupy the basins in the top of the Dakota sandstone. One of these basins lies east and north of Las Vegas in San Miguel County. . . .
>
> At many places within this area folding of the surface strata into domes and anticlines is conspicuous. . . Most of these folds are included in a zone of flexure which extends from the Sierra Grande uplift in western Union County, in a southwesterly direction parallel to the mountain, to the western part of San Miguel County, where the trend of the zone swings to the west around the southern nose of the Rocky Mountains. Most axes of the several structures within this zone are parallel to the trend of the zone, and in the northeast, from Des Moines to Las Vegas, structural axes trend northeasterly, while around the southern nose of the Rocky Mountain uplift, arranged like ripples around the bow of an advancing boat, the axes of the folds lie curving toward the west. A second zone of folding in the surface sediments is found extending from Clayton in eastern Union County, through eastern Harding, eastern San Miguel, and western Quay Counties, but in this zone the trends of the axes of the individual structures do not correspond with the trend of the zone, nor do they correspond with each other.[4]

This second set of folds which Harley speaks about is in the part of the county classified for this study as Plains. Probably

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[4]Harley, op. cit., pp. 30-31.

these folds are the reason he chose to include the region in his Plateau area. Like the land east of the Pecos it is so obviously Plains area in terms of climate and vegetation that it has been so classed for this research.

The dominant vegetation of the Plateau area is short grasses: blue grama, galleta, western wheatgrass and beard grasses. A literal interpretation of maps of the area would also show isolated zones of woodland type vegetation. When this was pointed out to one informant who had excellent detailed knowledge of the area, he said the authority who made such a statement was "out of his mind, there's no trees, forest, or whatever between here (Las Vegas) and the Texas border." Although the maps and personal observation show that indeed there are heavily wooded areas in the Plateau area, even small forests of pine, those who work on the land do not perceive such vegetation as woodland, but rather as "a few trees down in a hollow or up on a mesa." This land is treated and utilized as grassland pasture by those who deal with it. Trees are found most often on land that has been cut up by streams into canyons, generally on the south or shaded side of the canyons. The only exception to this is the land near Trujillo, at the edge of the Canadian Escarpment, where large pines, as well as typical woodland juniper and pinon, have invaded fairly flat grasslands. This is, of course, in the extreme eastern portion of the Plateau area, and does not disturb the generalized view of the area as gently rolling grassland. Local informants at Trujillo insist there is a vast supply of groundwater only a few feet below the surface.

This may help explain the appearance, right on the edge of the Plains, of vegetation that is more typical of the lower regions of the Mountain zone. The altitude of the Trujillo-Maes area is approximately 6,000 feet, so that this atypicality cannot be explained in terms of a rise above the other parts of the Plateau area.[5]

The Plateau area rises gently eastward from 6,500 feet elevation in the Las Vegas area to nearly 7,000 feet 15 miles east. It then gradually dips eastward to 6,300 feet and southward to 6,600 feet, part of it dropping off abruptly to the Plains area in both directions an average of about 1,000 feet. In the region north of Maes and Trujillo the Mora River joins the Canadian, and the drop is greater than 1,000 feet, such as in Canon Largo. If the trip to Maes and Canon Largo did not involve twenty miles of driving on rough wagon tracks, it is likely this could be a major tourist attraction, such is the magnificent panorama one finds, overlooking the drop-off to the Plains, with small irrigated plots of the village of Sabinoso on the Canadian below, and the Southern Plains and distant bluffs of the Llano Estacado southeast of the county. As it is, the area is more famed for its rattlesnakes than for its scenery.

Just as the Plateau area is essentially uniform in vegetation and land form, so the climate is nearly the same throughout. Annual precipitation has averaged between 15 and 16 inches from 1931 to 1964. There is more variation in the other two areas than in

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[5]Philip W. Wells, "Scarp Woodlands, Transported Grassland Soils, and the Concept of Grassland Climate in the Great Plains," Science, 148, No. 3667 (April 9, 1965), pp. 246-249.

the Plateau area. In Figure 6 the 16 inch isohyet line of annual precipitation runs northeasterly-southwesterly just west of Las Vegas, approximately the western boundary of this Plateau area. Similarly, the 15 inch isohyet coincides with the eastern boundary of this area. Average temperatures in the area are also fairly uniform, as seen by the following, the only available weather station in the Plateau area:

Location	January	July	Annual
Las Vegas	32.4 °F.	69.9 °F.	50.5 °F.
Pecos	29.7	69.1	49.0
Valmora*	30.7	68.7	49.3

*located in Mora County, just north of San Miguel County

The months of greatest precipitation are July, August, and September, with approximately 2 inches a month in this summer season. The rain of this period is nearly always in thunder showers, and often in very great amounts and of limited coverage in land area. In the course of this research such localized rainfall was observed in driving over one moderately large ranch, with rain and mud covering one portion, and dust and bright sunlight only a few hundred yards away. While it is conceivable that a part of the land might receive less rain than the rest, the coverage of these "cloudbursts," or "gulley-washers" seems to average out over a period of years to give fairly uniform rainfall to areas of the same elevation. Precipitation from November through April averages less than an inch a month, with less than half an inch the long-time average for both December and February. Thus, little moisture is obtained

from winter snowfall, which compounds the aridity of the entire county, since this is the period also of lowest insolation and potential evaporation loss when the soil could store moisture. At the very time when the soil receives minimal heat from the sun, it also receives the least moisture. The converse, of course, is also true. The period of maximum insolation is also the period of maximum precipitation. There is no doubt that this affects not only the flora and fauna of the area, but also human utilization of the area, and water and wind erosion of the landscape. Not only the amount of precipitation is important here, but the form too. Melting snow has a quite different effect on the soil beneath it than does a cloudburst of an inch of hard rain in an hour or two. This point is emphasized because there are areas north of this part of New Mexico, such as in northern Colorado, that have much less average annual precipitation, but more of this precipitation coming as heavy snows in winter and spring. Much more moisture is, apparently, retained in the soil, not lost by evaporation. Both natural grasses and crops such as winter wheat can be grown on a type of land that in northern New Mexico and southern Colorado is fit only as pasture. Levy noted a similar condition in comparing the Northern with the Southern Plains with relation to Indian cultures living on them.[6] He considered the Arkansas River to be the dividing line between the two Plains regions, noting also that the more severe winters

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[6]Jerrold S. Levy, "Ecology of the South Plains," in Viola Garfield, Symposium: Patterns of Land Utilization and Other Papers. Proceedings of the 1961 annual spring meeting of the American Ethnological Society (Seattle: American Ethnological Society, 1961), pp. 18-25.

of the Northern Plains compensated for the greater aridity of the Southern Plains in terms of bison hunting and continuous human habitation.

There are, incidentally, only three months of the year, June through August, when snow does not fall in this Plateau area, although most of the snow falls in the six month period November through April. The growing season of frost-free days is approximately from mid-May to early October, a period of 140 to 150 days, depending on the locality. The low annual precipitation, its timing and type, the seasonal winds of relatively high velocity, the dense ground cover of short grasses, and the normal dryness of the ground surface all act together to prevent growth of shrubs and trees except, as mentioned earlier, in the shady, southern slopes of canyons in the eastern part of the Plateau area and the rocky region along the Canadian Escarpment. The typical rolling plateau of this area is underlaid with light-colored sedimentary rock, the thin topsoil hardly more than a few inches deep. When there is no frost in the topsoil there appears to be excellent drainage of the area. There is practically no water erosion on this plateau, even though many parts of it have considerable slope. There are frequent hollows that in a wet season fill up with rain water, but even around these there are no trees or shrubs. The area is, as noted before, essentially treeless, very similar in appearance to the rolling hill country of southeastern Wyoming.

The Plains Area

The Plains area occupies the eastern half of the county. In area it is about 2,000 square miles. It extends eastward from the

6,000 foot altitude line in the county. This line runs northeast to southwest perpendicular to the general southeastward slopeof the county. Eastern parts of the area are slightly less than 4,000 feet in elevation. This part of the county is typical Southern Plains country and fits quite closely to what Levy delineates as the Southern Plains, a land of relatively low rainfall and high evaporation.[7] Typical vegetation of this area is grasses, courser than found on the Plateau area, mixed with cholla cactus, yucca and a great amount of mesquite and prickly pear cactus. Bushes and scrub plants of various kinds are found covering wide areas of this region. Along perennial and intermittent streams and trickles from springs are found a scattering of cotton woods and other trees typical of moist places in the Plains. This area is known in Spanish as "El Llano." It is not a part of the El Llano Estacado proper, the "Staked Plains," but is rather, north of this. Nevertheless many people in writing of this, such as Fabiola C. de Baca,[8] refer to this, particularly the southeastern part of this region, as a part of the Llano Estacado.

The rainfall in this region varies from 15 inches in the north, particularly the northeast part of the county, to less than 13 inches per year in the south central portion. This to a large extent corresponds to changes in altitude also. The only location in the county for which current figures for evaporation rates are available is at Conchas Dam, located in the heart of the Plains area of San Miguel County. There evaporation on the order of 50 inches

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[7]Levy, op. cit.

[8]Fabiola C. de Baca, We Fed them Cactus (Albuquerque: University of New Mexico Press, 1954).

of potential evaporation from April to October takes place from test pans at the Corps of Engineers Headquarters at Conchas Dam.

The average temperatures in this region vary, as does the terrain, far more than in the Plateau region. This is demonstrated by the following tabulation.

Location	Average January	Average July	Annual
in the county			
Bell Ranch	36.2°F	78.0°F	56.7°F
Conchas Dam	37.2	78.9	58.4
adjacent to county			
Dilia	35.3	73.8	54.3
Mosquero	33.0	73.0	52.4
Roy	34.1	71.8	52.4
Santa Rosa	38.4	77.4	57.9
Tucumcari	37.7	79.1	58.2

Conchas Dam, Bell Ranch and Mosquero are in the eastern part of the county. Dilia to the south, Roy to the northeast, Santa Rosa to the south are outside of the county. Tucumcari is southeast of the county. All are immediately adjacent to the county, however, and cam be used as examples of the climate of the Plains area.

From this list and by referring to previous maps, it can be seen that as one moves from north to south not only does the rainfall decrease but the average temperature increases, hence aridity is greater in the southern portion of the Plains Zone than in the north.

Like the Plateau area, the Plains area receives most of its

moisture in the summer months. The months of maximum precipitation at Roy are July and August. The same holds for Santa Rosa. Both of these, by the way, show heavy precipitation in May but not in June. Tucumcari has the same pattern, that is May, July and August are the months of high precipitation. The Plains area has even less snow than the Plateau area, being at a lower elevation. One can say that the months of November through February generally speaking are months with one half inch or less of precipitation. The summer temperatures, as has been noted before, are considerably higher than in the Plateau region.

One of the most striking features of the Plains region, of course, is that it is mostly a drainage basin for the Canadian River. The Canadian River runs, as has been noted before, from the north central part of San Miguel County down to Conchas Dam in the east central part of the county and then flows nearly directly east out of the county, eventually into Texas and Oklahoma. The tributaries of the Canadian are nearly all intermittent streams. Only along the Canadian River itself and only one place on the Conchas River, one of its main tributaries in the county, is there sufficient water for irrigation of the land for either crops or hay. On the Conchas River this area of greenness is very obvious as one drives through the area in midsummer near the town of Variadero. From there to Garita there is an exceptionally green area, apparently resulting not from the intermittent stream but from the appearance of ground water as springs flowing into the river bed.

Although many secondary roads are impassable in wet weather, a paved road, state highway 104, continues eastward from Trujillo, on

the Plateau-Plains border, across the county and gradually cuts southeastward ending in Tucumcari just outside the county. Off this highway there are several roads. State Highway 69, a gravel road, goes from Variadero south to Garita and to the small trading center of Cuervo, located on U. S. Highway 66 and the Rock Island railroad in Guadalupe County. Just west of Variadero, at the Trementina school, there is another gravel state highway, 65, which goes to Sabinoso and gradually over to Solano and Roy in Harding County, skirting the Pablo Montoya Grant. That road follows the border of the Plains Zone in the county. A paved highway, State 129, heads south from State 104 out of the county to Newkirk, another trading center on U. S. 66 and on the Rock Island line in Guadalupe County. The only other road of consequence in the zone is U. S. Highway 84 which branches from U. S. Highway 85 some five miles south of Las Vegas at Romeroville and runs directly out of San Miguel County south into Guadalupe County. It crosses the Pecos River shortly after leaving San Miguel County. There are many private roads in this area. Most of these roads have gates, many double-padlocked with only the landholders on either side having keys and access.

As mentioned earlier there were two railroads serving the Plains Zone of the county. The Colorado Southern's branch line has since been torn up and no longer runs from the Santa Fe railroad north of the county down to Tucumcari. However, the Rock Island main line to the west coast still runs through Tucumcari and much trucking of cattle goes on in and out from not only Tucumcari, but also Newkirk and other communities along this railroad.

Classification of Climates of the County

Utilizing the Koeppen-Geiger system of classification of climate, as described in Miller and Langdon,[9] graphs of average monthly temperatures and precipitation were drawn for several locations in the county. Using this method of classification, there are really only two major climate types in the county, Middle Latitude Steppe of the BSk type, and Undifferentiated Highlands.

The locations selected for classification in Figure 7 are good samples of the three major zones designated for this research, Plateau, Plains and Mountain. As Figure 7 indicates, the climates of Las Vegas and Rencona, both in the Plateau zone, although at different elevations and 19 minutes of latitude apart, have the same general pattern of precipitation and temperatures. When these patterns were being calculated from Weather Bureau data, it was felt that Rencona, being on Glorieta Mesa, was really in the lower part of the Mountain Zone. However, the relatively low precipitation in winter months compared to other Mountain locations and the higher July average temperature clearly indicated this is in the Plateau Zone. Geologically, Glorieta Mesa is considered a part of the mountain formation of the area, but for the purposes of this study both climate and vegetation obviously call for it being classed as part of the Plateau Zone.

The Bell Ranch station, located in the central part of the Plains Zone, is clearly a variant of the Middle Latitude Steppe climate, and is taken as representative of Plains Zone climate in the county. The climate is sufficiently different from that of the Plateau Zone to justify

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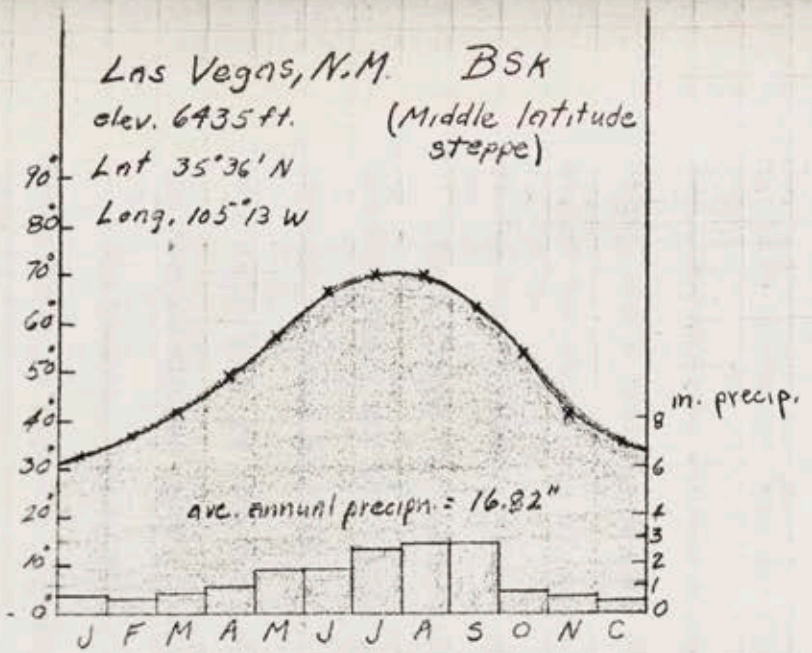
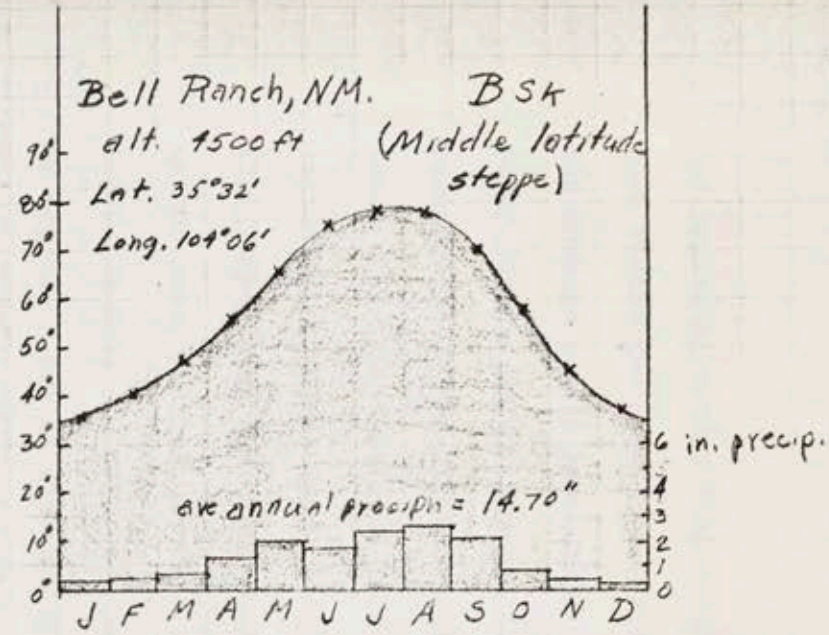
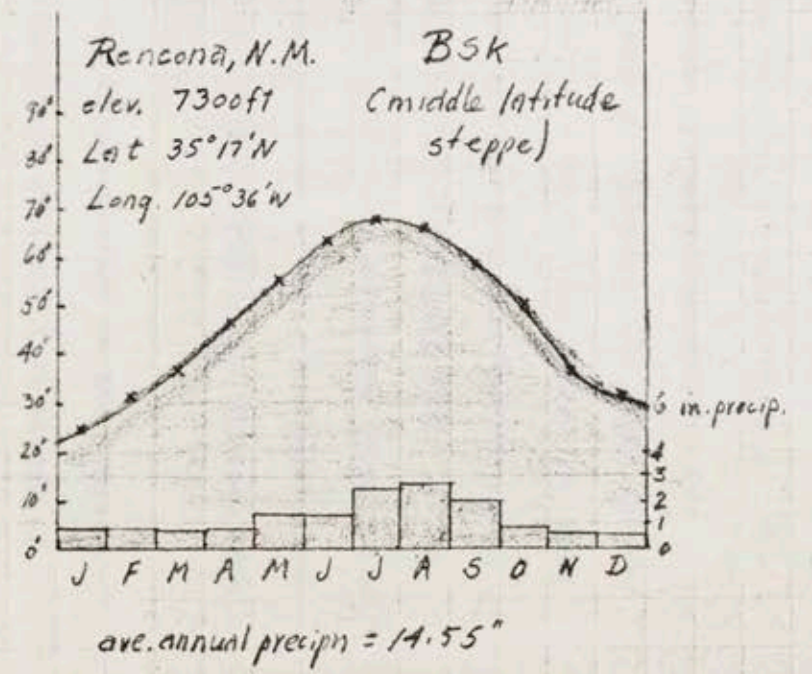
[9] E. Willard Miller and George Langdon, Exploring Earth Environments (New York: Thomas Y. Crowell Co., 1964), pp. 275-278.

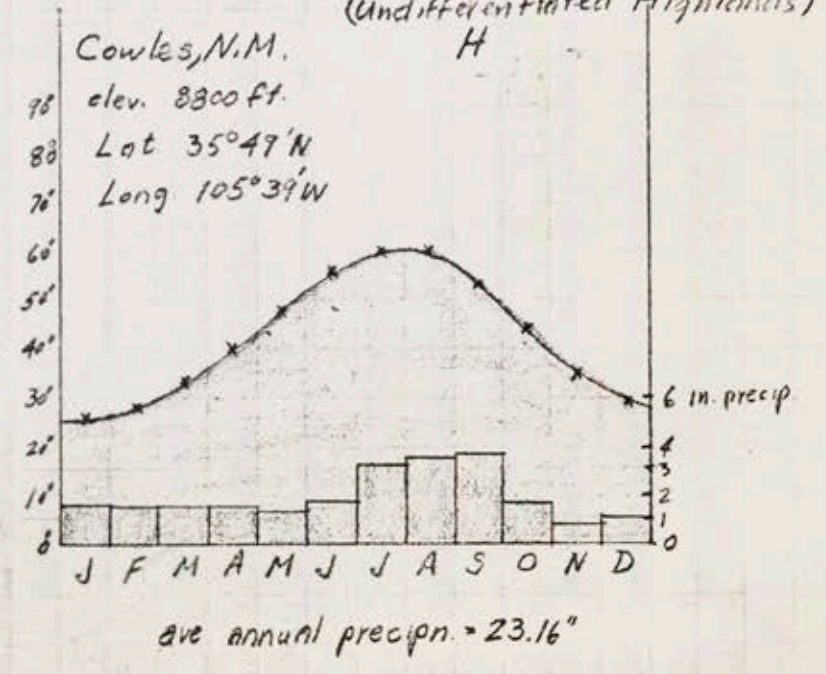






ave. annual precipn = 14.55"

(Undifferentiated Highlands)



ave annual precipn = 23.16"

Figure 7

Köppen-Geiger Classification of Climates, San Miguel County, N.M., U.S.
- reference - Miller and Langdon, 1964, pp 275-78

the segregation of a Plains from a Plateau Zone, although some writers have stated that the High Plains of the southwest extend directly from the Rockies to the more humid Prairie area of the Midwest. Perhaps a study focused on the western edge of the High Plains gives a reverse perspective of the situation from that seen by those looking from the east. It might seem more in order to say the Plateau climate is a variant of typical Plains climate. But, in other ways, including vegetation, topography and other factors, the Plateau Zone appears to be a unique area, neither Mountain nor Plains, nor merely a transition between the two. In any case, there are enough differences in climate, in degree if not in distinct quality, to separate Plains from Plateau. Not only is rainfall two inches less at Bell Ranch than at Las Vegas and other Plateau stations, as Figure 7 shows, but also the precipitation at Rencona is even less than at Bell Ranch. The temperature pattern is quite different from any Plateau station, including Rencona. The low temperatures, for the winter months are about the same as Las Vegas, and a good bit higher than Rencona. However, the highs are far higher for the months of maximum average temperature, indicating longer and hotter summer weather on the Plains than in the Plateau Zone.

Even though the whole county, excluding the higher parts of the Mountain Zone, may be classed as semi-arid, with potential evaporation exceeding actual precipitation more than three times, the Plains Zone is a drier part of this semi-arid environment than is the Plateau Zone. The Koeppen-Geiger graphs indicate this.

The Mountain Zone, for which the Cowles station on the upper Pecos River is taken as typical, clearly is distinct from either of

the two variants of Middle Latitude Steppe climate, with considerably more precipitation, especially as snow in the winter months, and with a much narrower range of monthly average temperatures, a lower minimum monthly and a lower maximum monthly temperature. There can be no question of the proper classification of the Mountain Zone as having an Undifferentiated Highlands climate under the Koeppen-Geiger system. The small size of this zone, as compared to the other two zones, and the limitations placed on land use by rugged terrain and severe winter weather, make this Mountain Zone of small importance for a study of cattle ranching as a way of life.

CHAPTER III

POPULATION OF THE COUNTY

Introduction

The ranching population of San Miguel County does not live in a social vacuum. There are many other people, both rural and urban in residence, in the county. In fact, the ranching people are a very small minority of the total residents. Even in the rural areas they are only a few hundred people out of nearly ten thousand rural residents. But they are a very important minority, for they are the people who produce almost ninety per cent of all agricultural sales. They are obviously the most successful people in the county earning their living from the soil. The statistics presented in this chapter show the attempts by homesteaders at other modes of adaptation to the surroundings. The county is full of ghost towns and settlements of one or two families surrounded by ruined buildings where a generation ago many people were living in farming communities. Cattle ranching has proved far more adaptive. With the decline in farming population, and with the general low economic level of the county's population, the ranchers may seem to themselves and others far more successful, more financially secure than they really are. Such an outlook would help explain the refusal of most ranchers to take up new practices and techniques of ranching, even though the environment seems to demand this. The abandonment of farming as a way of life, especially since World War II, only convinces the ranchers that they have found the only right way to deal with the environment.

General Characteristics

San Miguel County, like many other parts of the western United States, has declined in population in the past two to three decades. However, unlike the other counties of northern New Mexico, San Miguel is and has been for a very long time a predominantly urban county. That is, the majority of the people live in the two incorporated adjacent settlements of the county, the City of Las Vegas and the Town of Las Vegas, often referred to as "New Town" or "East Las Vegas" and "Old Town" or "West Las Vegas," respectively. In 1960, 23,468 people lived in the county. 9,650 of these people were classed as rural residents, and 13,818 as urban residents.

Although a very large number of people were classed as rural in residence, only a small fraction of this group were classed as rural-farm residents, 1,567. Even this number exaggerates the portion of the population seriously engaged in agriculture as an occupaton. By the Bureau of Census definition farm population

> . . . consists of persons living in rural territory on places of 10 or more acres from which sales of farm products amounted to $50 or more in 1959 or on places of less than 10 acres from which sales of farm products amounted to $250 or more in 1959.[1]

From Census of Agriculture statistics for the same year, 1959, it is evident that there are virtually no so-called "subsistence farms" in the county. It is unlikely that any person or family

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[1]U. S. Bureau of the Census, U. S. Census of Population: 1960. General Social and Economic Characteristics, New Mexico. Final Report PC(1)-33C (Washington, D.C.:Government Printing Office, 1961), p. viii.

with income from cash sales of produce, which actually includes barter or exchange transactions, in the lower ranges of $50 or even $250 income, is a serious commercial farmer or rancher. From information obtained in the course of the present research, it is very clear that small operators in livestock, and presumably also in crop farming, obtain income from other work to make up the chief part of their livelihood.

Like the other counties of northern New Mexico, this county is divided into two major ethnic groups, Hispano and Anglo. There are no Indians in this county today. At least in San Miguel County it seems safe to equate persons who were returned in the 1960 and 1950 Censuses as "white, Spanish surnamed" with Hispano. There are a few people of Spanish surname who can be said to be nearly completely Anglo in their ethnic identity, but this small group is countered by a number of people of non-Spanish surname who are decidedly Hispano in their identity. Watson's and Samora's term "Spanish-speaking" is not altogether appropriate, for there are many people who do not use Spanish at home, who are even militant in preventing their children from speaking Spanish, and yet who are still otherwise very much Hispano in their ethnic identity.[2] In 1960 there were 16,078 persons of Spanish surname in the county, 68.6% of the total population. In 1950 there had been a much larger number, 20,524 such people in a total population of 26,512, or 75.1% of the population.

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[2] James B. Watson and Julian Samora, "Subordinate Leadership in a Bicultural Community: An Analysis," American Sociological Review, 19, (August 1954), pp. 413-421.

The Anglo ethnic group, because of nearly complete absence of non-whites in the county's population, is the remainder of the population, those not white Spanish surnamed. In 1960 this group had 7,390 people, 31.4% of the population. In 1950 it made up only 24.9% of the population with 5,988 people.

There was an overall loss in population of 3,044 between 1950 and 1960, or 11.5%, but the loss in the Hispano segment of the population was much greater during this period, mounting to 4,446 people or 21.6%. At the same time there was an increase in the Anglo segment of the population of 1,402 persons or 23.4%. Unfortunately, statistics on ethnic identity of Hispano and Anglo are not available for earlier censuses, but there has been a general trend in the last fifteen years in the northern counties of New Mexico for the Hispano portion to decrease and other groups, Anglo and Indian mainly, to increase at a rapid rate and replace the Hispano element.

Figures 8 and 9 show age and sex characteristics of the total population of San Miguel County for both 1950 and 1960. It is clear from these population pyramids that the decrease in population has not been uniform through all age groups, but concentrated more in the middle years, from 25 to 45, and also in the very youngest group, under 5 years of age. The median age in 1960 was 22.2 years for the total population, 21.5 years for males, 23.1 years for females. In 1950 the median age for the total population was 22.6 years. No breakdown is available for that year on male-female differences. The nearly equal median age is accounted for by the relatively static old and young populations and does not show as do

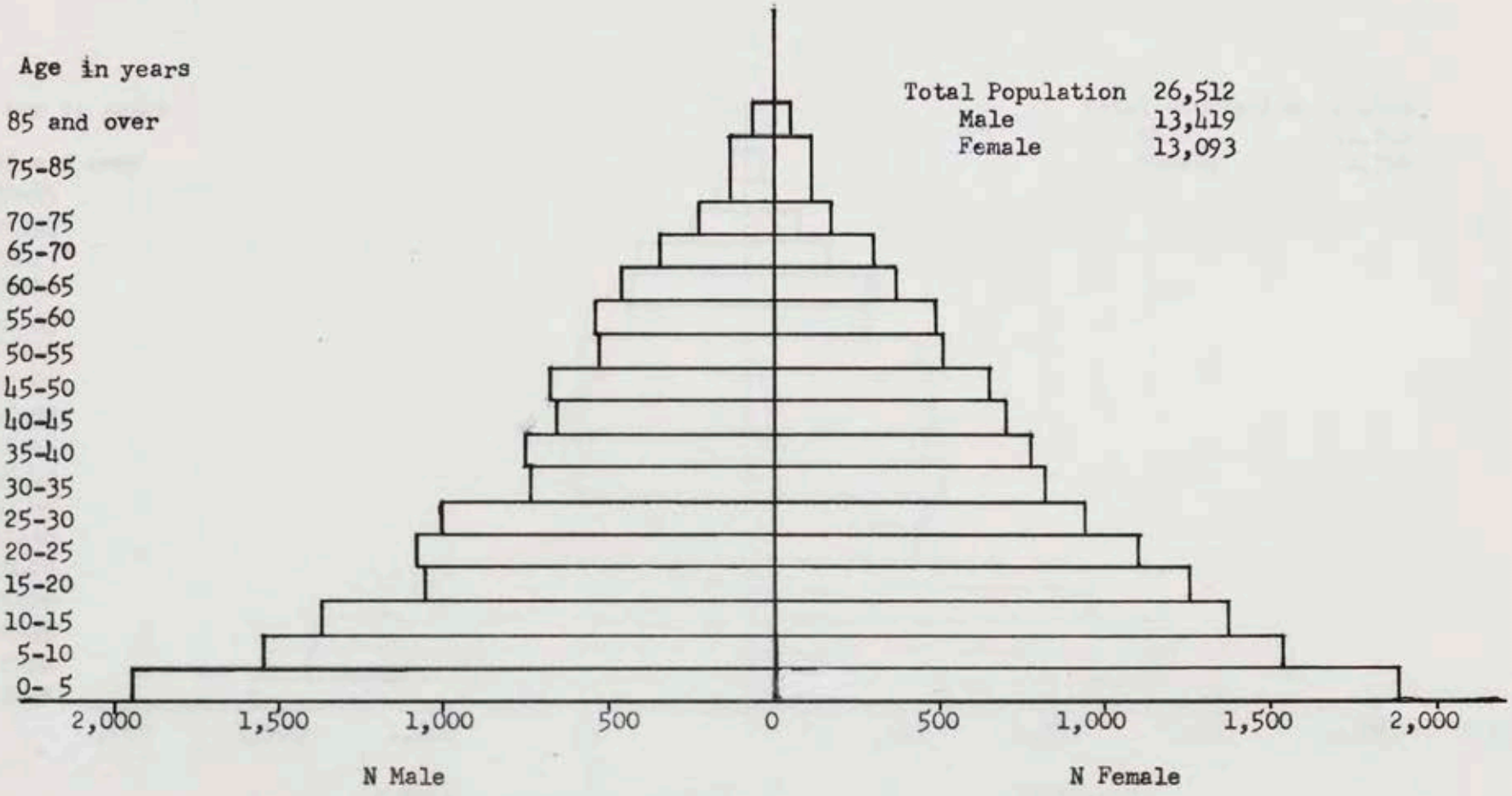


Figure 8, Population of San Miguel County, N.M., 1950, by Age and Sex
(data from U. S. Census, 1950, General Characteristics, New Mexico, Table 41)

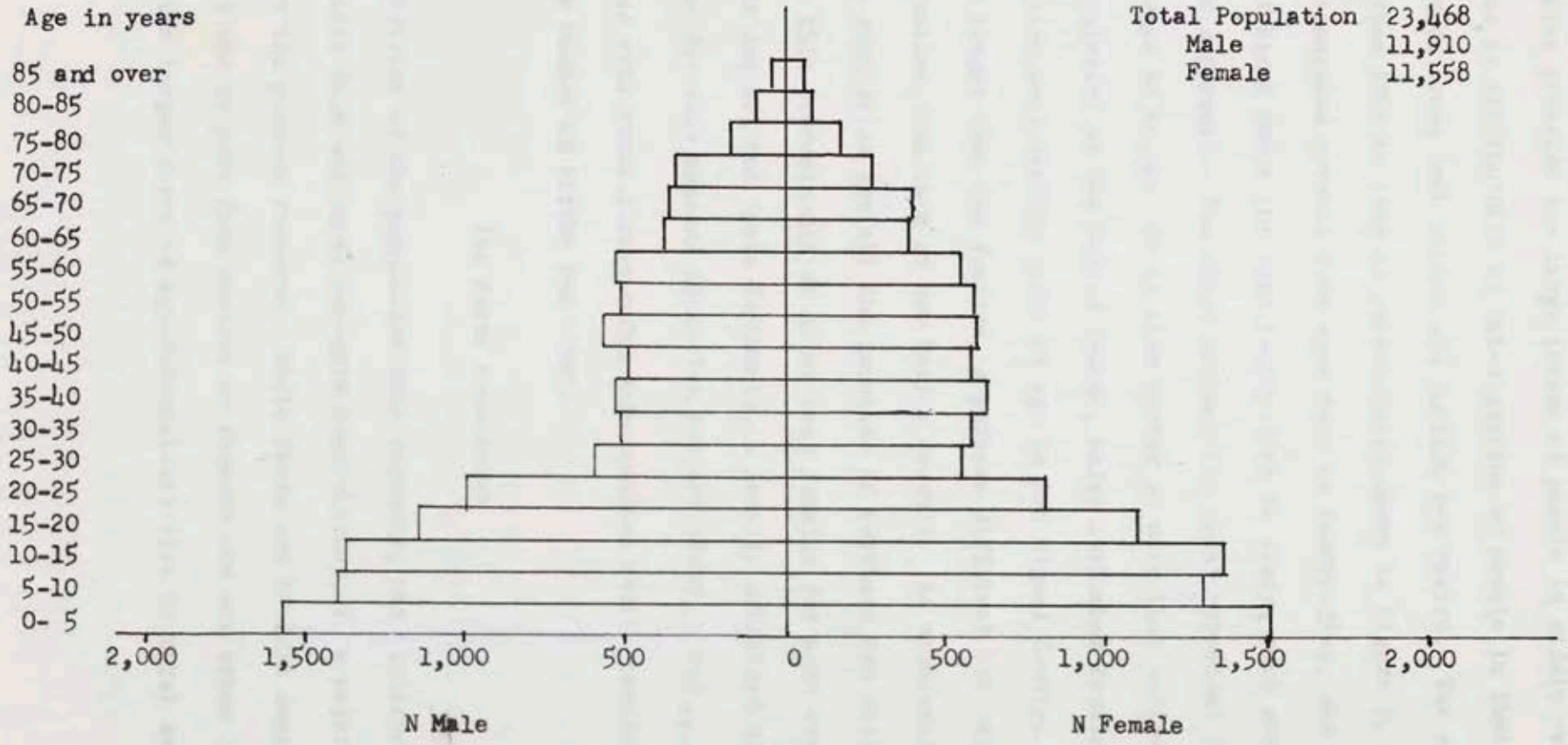


Figure 9, Population of San Miguel County, N.M., 1960, by Age and Sex
(data from U.S. Census, 1960, General Population Characteristics, New Mexico, Table 27)

the population pyramids the large losses of people in middle years. Most of this loss is attributable to out-migration of people in their "prime" years to urban areas both within and outside New Mexico. The effect of this loss from 1950 to 1960 is dramatically shown in Figure 9, with a very much truncated pyramid from ages zero to twenty-five, and then a quite different shape for ages twenty-five to sixty, much more an oblong than a pyramid. The chart resumes the usual pyramidal form only from ages 60 on up. It is also worthy of note that unlike the general population of the United States, males outnumber females in all categories over seventy years of age in San Miguel County. The males live longer than the females, a pattern different not only from the whole nation, but that of New Mexico overall. An examination of population statistics for all the counties of northern New Mexico shows that this predominance of males over females for ages over 65 or 70 holds for all but Santa Fe County, a heavily urbanized area. The reasons for this unusual situation are not clear, but they may be connected with rural living under sub-standard health conditions and a large number of births per woman.

The Rural Population

The division of the population into segments, particularly into its rural farm and rural non-farm subdivisions, is a major concern for the present research. While there are 54 farm owners or managers and 35 paid farm workers or foremen who are urban dwellers, the larger share of agriculturalists live in rural areas.

Figures 10 and 11 show the composition of the rural population for 1950 and 1960 respectively. The changes in population over the decade 1950-1960 are more subtle for rural dwellers than for the overall population. That is, the usual pyramidal form is more closely followed. As with the total population, there is a large decrease in very young children, connected, doubtless, as with the total county, to large-scale emigration of people of the most active years of reproduction, the early middle years. A difference from general population changes is the decrease in all ages up to about 50 years, the older children and adolescents also decreasing heavily in number. The number of both males and females in all age groups over 25 years is essentially the same until age 60. Number of residents older than sixty declined less than those of other age groups, with those in the seventy to seventy-five year group actually increasing in 1960. Overall, the rural population declined by about 25% from 1950 to 1960, from a total of 12,749 people down to 9,650. The urban segment of the population remained essentially the same; 13,763 in 1950 and 13,818 in 1960. Thus the overall loss in population noted previously is accounted for entirely by a decrease in the rural population. Only a small part of this can be accounted for by expansion of the urban areas to include former rural areas. Most of the decrease is a result of people moving out of rural areas into local and other urban centers of the United States.

It is difficult to consider the ethnic composition of the rural population of the county, for no statistics on this are available for 1960. However, an indication of the ethnic division can be obtained from the 1950 Census, which did break down the returns on

Figure 10, Rural Population of San Miguel County, N.M., 1950,
by Age and Sex

(data from 1950 U.S. Census of Population, General Characteristics,
Tables 48 and 49)

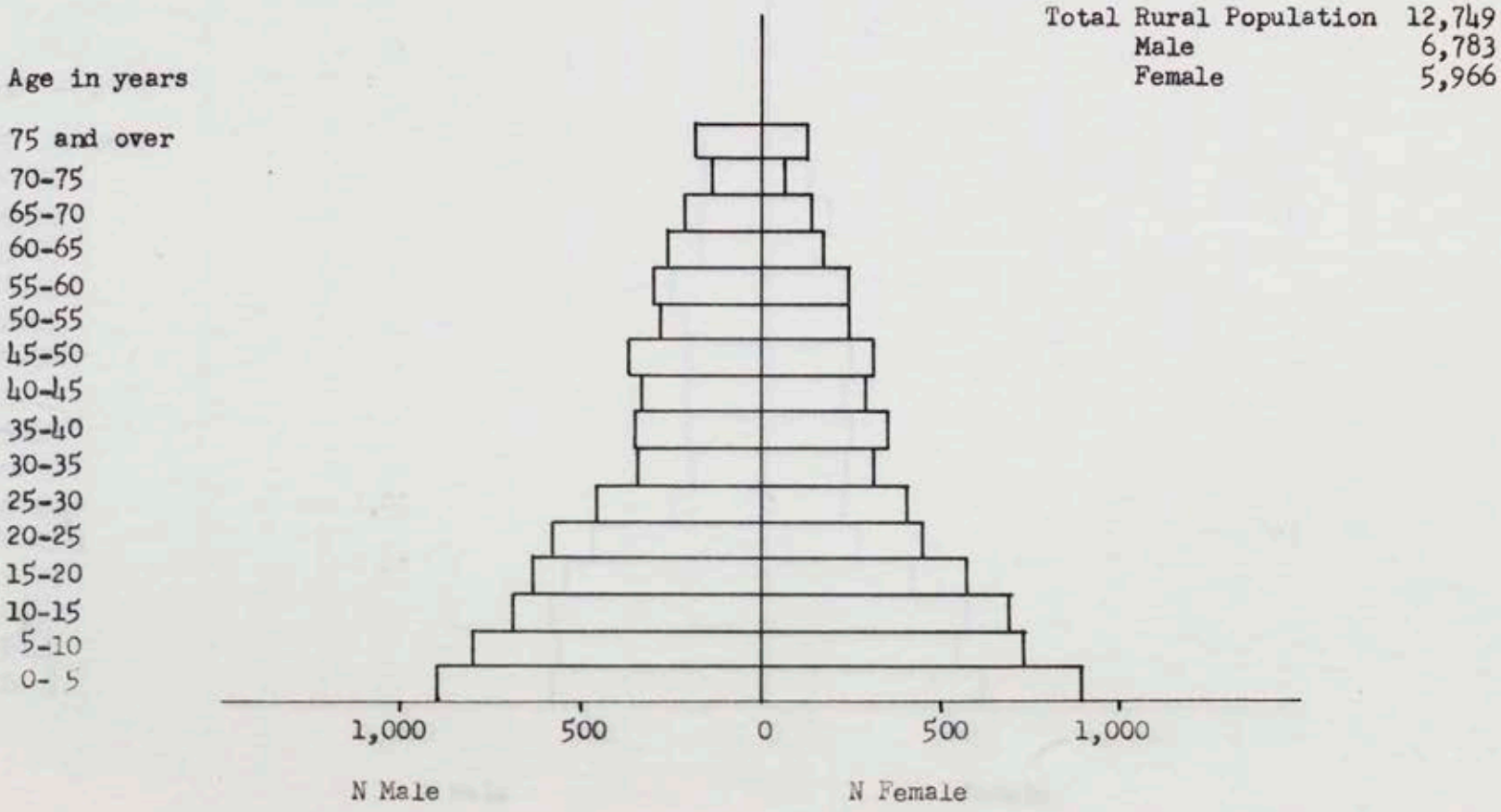
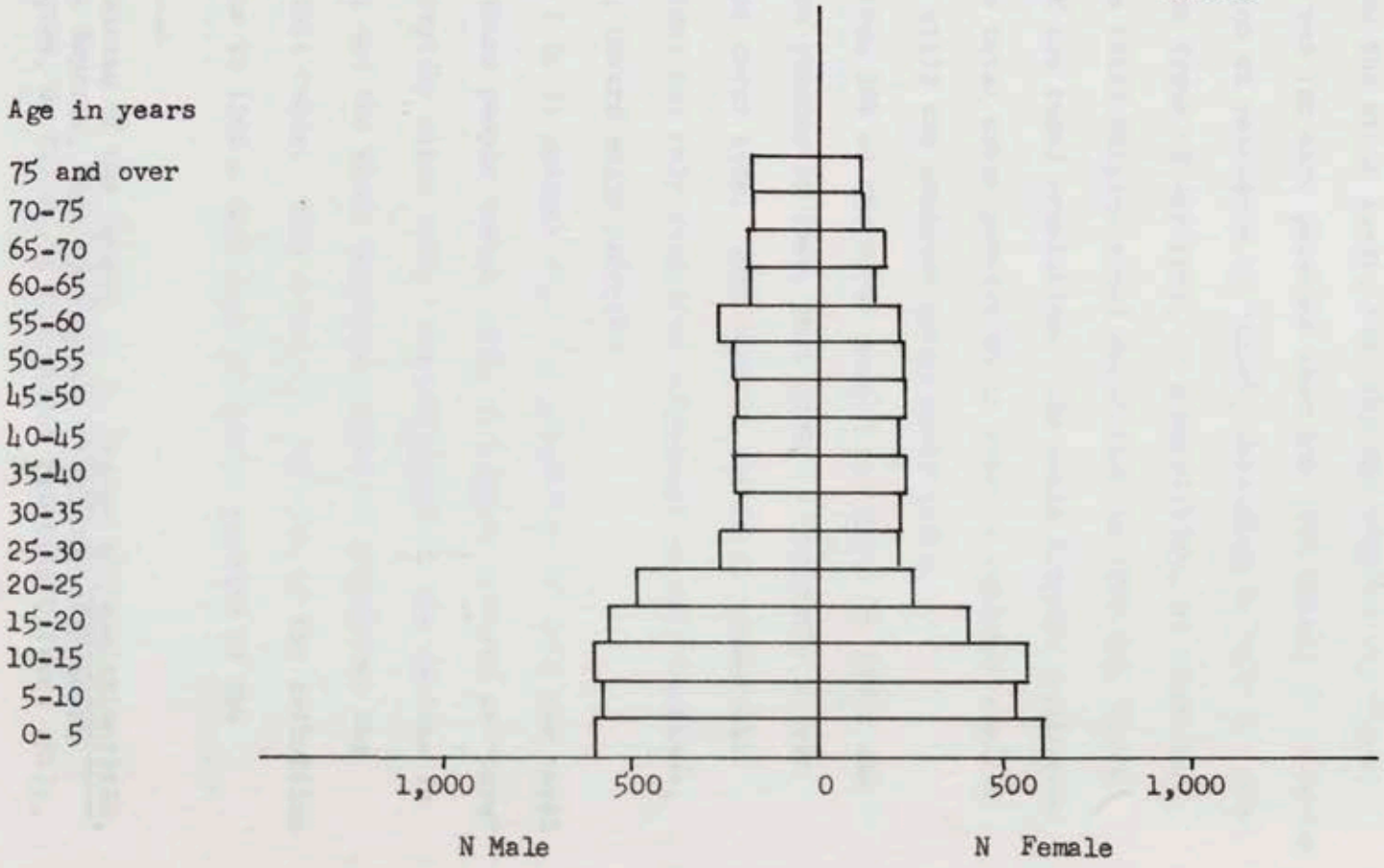


Figure 11, Rural Population of San Miguel County, N.M., 1960,
by Age and Sex
(data from 1960 U.S. Census of Population, General Characteristics,
New Mexico, Tables 29 and 30)

Total Rural Population	9,650
Male	5,216
Female	4,434



white people of Spanish surname, the Hispanos of this research.[3] In that year there were 5,617 such people classed as rural nonfarm and 4,889 as rural farm. 10,018 were residents of urban areas, with the Hispano population thus divided nearly equally between the rural areas of the county and the urban areas, the City and Town of Las Vegas. The 1950 Census was far more generous than the 1960 Census in criteria for classification of residence as "farm", including in this all persons who lived on farms of any size, or productivity, or commercial importance. The total Hispano rural population in 1950 was 10,506 people, 82.7% of the rural population. The urban Hispano population was 73.9% of the total urban population in 1950, a somewhat smaller proportion, but still the dominant group numerically.

With less than 20% of the rural population Anglo in 1950, and probably not much greater in 1960, this group is obviously a very small minority of rural life. That this is not so in commercial ranching operations has only increased resentment of many Hispanos, rural and urban, toward Anglo ranchers.

From Table I it is evident that the proportion of both the total population and those people having rural residences classed as "farm" have decreased rapidly since 1940. Investigation of the decline in both dry farming and the whole homestead movement reinforces the trend shown in this table. With a drastic revision of the definition of farm residence in 1960 a much more realistic picture of the

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[3]U. S. Bureau of the Census, U. S. Census of Population:1950, Vol. IV, Special Reports, Part 3, Chapter C, "Persons of Spanish Surname" (Washington, D. C.: U. S. Government Printing Office, 1953), p. 64.

Table I - Rural Population of San Miguel County, 1900 to 1960

Source: U. S. Censuses of Population, 1900 through 1960.

Year of Census	Total	Rural	Rural Farm	% Rural Farm	Number Farms
1900	22,053	16,689	———	———	1,297
1910	22,930	15,618	———	———	1,468
1920	22,867	14,647	———	———	1,643
1930	23,636	14,539	7,533	51.8	1,670
1940	27,910	15,548	9,101	58.5	1,482
1950	26,512	12,749	5,638	43.2	1,050
1960	23,468	9,650	1,567*	16.2*	732 (802**)

Note: * - by new definition of farm in 1960, same as in 1959 Agricultural Census

** - number of farms by 1950 definition of farm in Agricultural Census

situation is seen. The 1959 Census of Agriculture used the same new definition, so that it can be said that in 1960 there were 1,576 people living on 732 farms of all sizes. Even so, this number of farms must be modified downward if only those people who make all or the majority of their income from farming are to be counted as real agriculturists. In 1960, 387 farm operators had other family income exceeding the value of farm products sold.[4] 52 of these part-time operators were classed as Commercial farmers, that is, having farm products sales greater than $50 in 1959 and being under

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[4]U. S. Bureau of the Census. U. S. Census of Agriculture: 1959, Vol. I, Counties, Part 42, New Mexico (Washington, D.C.: U. S. Government Printing Office, 1961).

65 years of age.[5] Since 372 farms were classed as Commercial that year, only 320 operators were under 65 years of age and obtained over half their income from agricultural activities. Further, in terms of the present research, 302 farms were classed as livestock ranches, having livestock and livestock products as 50% or more of the total value of farm products sold, and pasture or grazing land amounting to 100 or more acres and 10 or more times the acreage of croplands harvested.[6] Comparable statistics for previous census years are not available, unfortunately, so that comparison of commercial farming activities is not possible.

Age Distribution of Rural Population

Figure 12, Rural Farm Population, 1960 shows the disproportionate segment of this population in the older years. This pyramid was deliberately made to show proportions of the population in various age groups rather than absolute numbers in each group, although these are included in the figure. From the figure it is startling to note that there are nearly twice as many rural-farm males in the 55 to 60 year age group as in most younger age groups down to the 15 to 20 year group. Also, over 40% of the rural farm population is under 20 years of age, while only 17% is in the next twenty-year group, ages 20 to 40. The next higher twenty-year span, 40 to 60 years, accounts for about 25% of the population.

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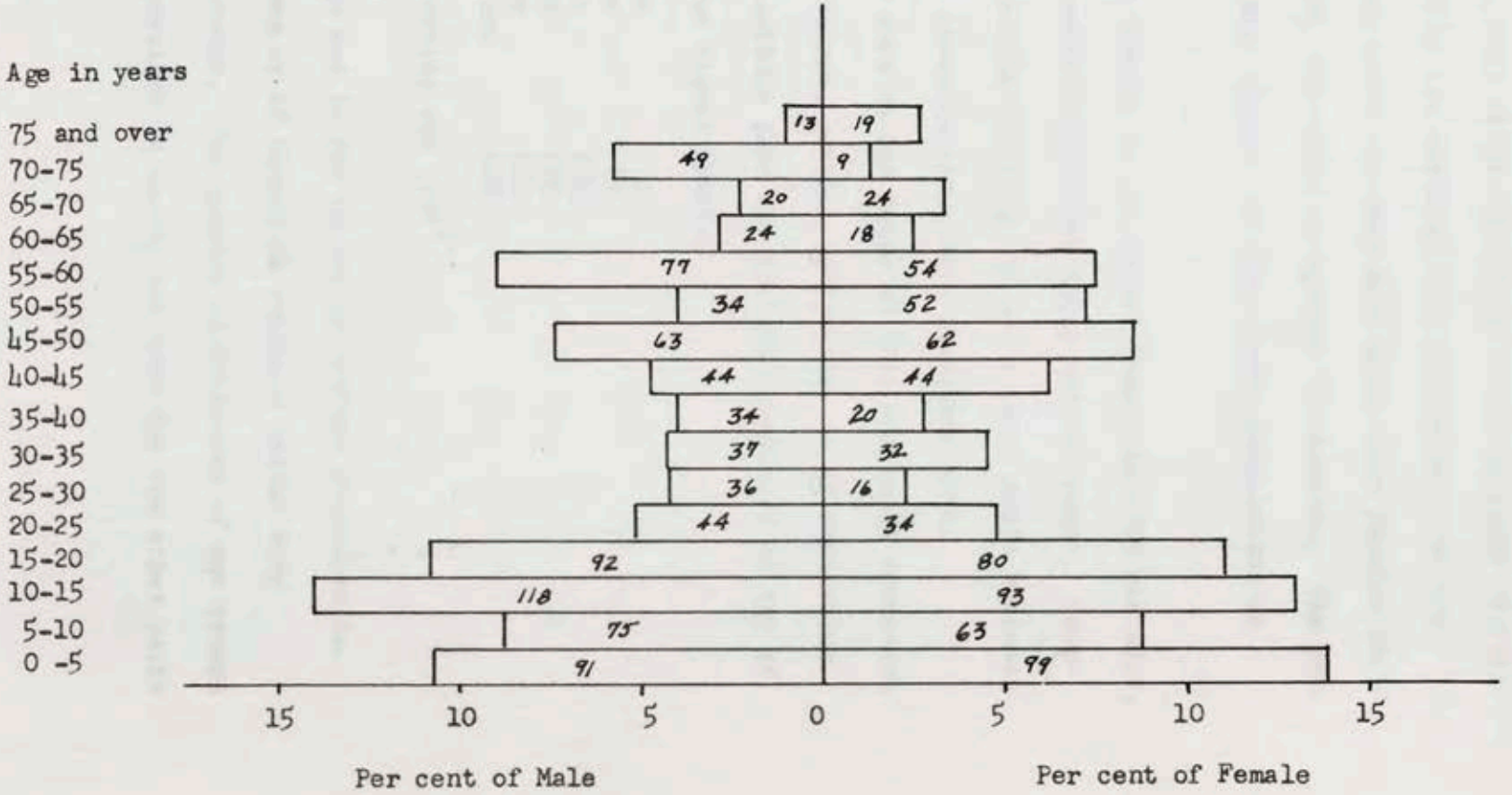
[5] Ibid., p. 129.

[6] Ibid., p. 132.

Figure 12, Rural-Farm Population, San Miguel County, N.M., 1960, by Age and Sex

(data from U.S. Census of Population, 1960, PC(1), 33C New Mexico, Table 92)



The oldest 20 year span group, over 60 years, shows a large difference between male and female, with about 12% of the rural-farm men in this group, and less than 10% of the women of this population. As the figure also demonstrates, there are many more males than females in the rural-farm population, 848 males as against 719 females. The preponderance of males is also typical of other rural populations in northern New Mexico.

The average age of farmers in San Miguel County in 1959 was 52.6, with 147 out of 724 operators responding being over 65 years. Farming, and this includes cattle ranching, is not a young man's business in the county. Further investigations have confirmed this.

Although available data on age range of farm and ranch operators from public sources is scarce, general information is of some value. The 1959 Census of Agriculture gave the following analysis of age of all farm operators in San Miguel County:

Under 25 years	3
25 to 34 years	71
35 to 44 years	121
45 to 54 years	200
55 to 64 years	182
65 or more years	147
Operators reporting age	724[7]

Unfortunately there was in the Census no further breakdown in ages of commercial farmers or of livestock ranchers versus crop farmers, or of income groups. The general distribution of age groups among farm and ranch operators is nearly the same for the other parts

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[7] Ibid., p. 132.

of northern New Mexico. Only in the southeastern part of the state, where irrigation farming on a large scale is common, does the age grouping cluster at a lower level, with 48 to 49 years of age the average, as opposed to the 51 to 54 years average of the north. As one younger rancher informant said,

> Ranchers are all so up in their years, they have to make and use all sorts of gadgets to handle, hold, and flip calves at branding time. They just can't work the way they could in their younger days.

Not only are farm operators an aging group, but, equally obviously, there are few young men entering the group. Neither farming nor ranching is recruiting young people, but rather losing them to other economic activities. In the whole county there are only a few, possibly 10 to 15, sons of ranchers working with and planning to take over from their fathers. Most of these are Hispanos. According to several informants there is only one Anglo ranch in the whole county that has been worked by two generations of the same family. Far more Hispano cattlemen have inherited their land and their occupations from their fathers. They have been on the land generally much longer than Anglo cattlemen, with few exceptions.

Economic Characteristics of the Rural-Farm Population

In addition to age and ethnic identity, certain other categories of analysis of the rural-farm population are available from public sources. Of value for this research are economic and housing statistics. Recalling that 1960 and 1950 figures on this

population are not strictly comparable because of a change in definition of farm residence, much still can be learned, inferred, from comparing the two censuses.

The male labor force in 1960 for this population was 421, with 385 employed. The female labor force was 99, with 87 employed. With only 36 unemployed males and 12 unemployed females, this population has a lower unemployment proportion, 48 out of 520, or 9.23%, than the whole county, which had 904 or 14.5% unemployed out of a total labor force of 6,243.

Of the rural-farm labor force, small compared to the overall county labor force, 247 males and 17 females were directly employed in agriculture in 1960. Farmers and farm managers accounted for 139 males and 13 females. Paid farm workers and farm foremen numbered 100 males and 4 females. Unpaid family farm laborers were 8 males and no females. In the whole of the rural-farm population in 1960, then, 264 people were classed by occupation as farm operators or workers, 68.6% of the employed population.

These statistics by no means include all people in the county who were classed as farmers and farm workers, however. A total of 340 men were farmers and farm managers, 201 more than those living on farms. Further, 292 paid farm laborers and foremen lived in the county, 192 more than those living on farms. 286 of the former group, farmers and farm managers, lived in rural areas, 147 not on farms. The remainder of this group, 154, lived in urban places, obviously the Town or City of Las Vegas. Of the latter group, paid farm laborers and foremen, 257 lived in rural areas, 157 off farms,

while 35 lived in the urban places. All of the women classed in farming occupations were rural-farm residents.

From these additional rural statistics it is evident that a true picture of the agricultural segment of the population cannot be had from only that part classified by the Census as rural-farm. But a partial view that appears from evidence of field work to be representative of the ranching aspect of agriculture in the county, can be gotten from a study of rural-farm characteristics. The rural-farm segment is in many ways different from the rural-nonfarm segment, and more like what has been seen in the course of field research in this study. Thus, in the whole rural segment there were 346 unemployed men and 131 unemployed women, a total of 477 people, from 1770 men in the labor force and 443 women, 2213 people in all. The rate of unemployment for the overall rural population is exactly 20.0%.

Extracting the rural-nonfarm part of the population, the difference between farm and nonfarm parts becomes very marked. The total rural non-farm labor force was 1,349 men and 344 women, a total of 1,693 people. Of these, 1,039 men and 225 women were employed, for a total of 1,264 rural non-farm people employed. This leaves 429 people unemployed, or a very high 25.4%. It is generally acknowledged that rural-dwelling people form the bulk of the chronic unemployment of San Miguel County. Recalling Table I, which showed that 9,650 people lived in rural areas in 1960 and only 1,567 of these were living on farms, the rural non-farm population was 8,083 people, 34.4% of the county's total population. While it is not a direct concern of this study, this non-farm seg-

ment of the rural population is the object of much concern in community development, welfare, health, and economic aid programs. The area is typical of northern New Mexico, and is overwhelmingly Hispano in ethnic identity. Employment in agriculture, 147 people as farmers or farm managers and 157 as paid farm laborers or foremen, gives work to 24.0% of those employed.

To emphasize further the inferior economic conditions of the rural non-farm population, mention should be made of the condition of the urban segment of the population. There are 4,430 people in the urban labor force, with 427 people unemployed. This yields an unemployment rate, 9.66%, approximately the same as that of the rural-farm population, 9.123%. In absolute terms also the urban unemployed are outnumbered by the rural-nonfarm unemployed, 427 to 429. Considering that the urban labor force, 4,430, and the urban population, 13,818, both are much greater than the rural non-farm labor force, 1,693, and population, 8,083, unemployment is disproportionately greater in the rural-nonfarm segment of the population.

In terms of the main concern of this study, there is a steady increase in the percentage of people employed in agriculture as one moves from the city, 3.28%, the rural non-farm, 24.0%, and the rural-farm, with 68.6%. By definition, this is to be expected.

Other economic activities of the rural-farm population are minor compared with agriculture. In manufacturing 13 men and no women did work, as of 1960. Wholesale and retail trade accounted for 12 men and 8 women that year. Other industries and "no re-

port" took in 113 men and 62 women. Those over 14 years of age but not in the labor force numbered 163 males and 386 females. The males in this last category were mainly in school, while the females were either in school or housewives.

Specific occupations other than farming were as follows in 1960:[8]

operatives and kindred workers - 51 males, no females
craftsmen, foremen and kindred workers - 33 males, no females
laborers, except farm and mine - 21 males, no females
professional, technical and kindred workers - 12 males,17 females
clerical and kindred workers - 9 males, 21 females
private household workers - no males, 8 females
service workers, not household - no males, 8 females
sales workers - no males, 4 females

In the decade from 1950 to 1960 there were changes in both overall employment and specific occupation in the rural-farm population, remembering also that a large part of the 1950 rural-farm population was reclassified as rural-nonfarm in 1960. The labor force, from what was in 1950 a rural-farm population of 5,638 people, was 1,318 men and 158 women, of whom 1,220 men and 134 women were employed, yielding a total rural-farm labor force of 1,476, with 1,354 people working. Unemployment was 8.26% of the labor force. Overall, the county had 10.2% unemployment that year.

While employment in types of industry was not given in the 1950 Census for the rural-farm population, employment by specific types of work was. Most notable, and most to be expected among

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[8]U. S. Bureau of the Census. U. S. Census of Population: 1960. General Social and Economic Characteristics, New Mexico. Final Report PC (1) - 33C (Washington, D.C.: Government Printing Office, 1961) p. 124. This same source has been used throughout this chapter in considering the 1960 characteristics of the population of the county, although individual footnotes have not been used because they would be cumbersome.

changes here, with the change in definition of farm, was the large decline in agricultural work. In 1950, 673 men and 12 women were farmers and farm managers, a total of 685 rural-farm people thus employed. In 1960 only 162 people were so classed. The number of farm laborers and foremen decreased also, but only from 153 men and 2 women, 155 total, to 104 farm workers. The sharpest decline was in unpaid family farm workers, from 129 men and 20 women in 1950, to a total of 10 such workers in 1960. This decrease probably is a result of the virtual elimination of subsistence farms during the decade. The 1960 Census does not even list this class of worker in the total county or rural population statistics, only under rural-farm population. Total income-producing agricultural employment was 840 people in 1950 among rural-farm residents, 62.0% of all these people employed.

Showing that the decrease in agricultural employment is by no means caused by redefinition of residence, for the whole county such employment decreased from 1,270 in 1950 to 665 in 1960. This was a decrease from 23.6% of all employment to 12.5%, a net change downward of 47.0%.[9] Since overall employment in the county remained almost constant, 5,377 in 1950 and 5,339 in 1960, and unemployment increased only from 609 to 904, it is evident that many of the 605 people no longer employed in agriculture in 1960 left the labor force by leaving the county. Assuming that many, even most of the former agricultural workers were heads of families, the decrease in rural farm population, and in the total population of the county can almost

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[9]Maloney, op. cit., p. 8.

entirely be explained by a migration of perhaps more than 2,000 people out of the rural area, and out of the county.

The change in San Miguel County, dramatic though it was, was repeated in similar changes of a more radical nature in all the other counties of northern New Mexico. Mora County, on the northern border of San Miguel County, had a decline of 68.2% in agricultural employment over the same decade, with a decrease in the labor force of 49.9%. Taos County, just west of Mora County, had a decline in farm jobs of 74.3% and in its labor force 21.3%, while Rio Arriba County, archtype of Hispano rural settlement, had an 83.7% decrease in agricultural employment and a 20.6% decrease in labor force. San Miguel County, because many women entered the labor force during this decade, actually had a slight increase in its labor force, up 4.3%.

The conclusion is easy and safe to make that the decade from 1950 to 1960 was a time of massive abandonment of small-scale crop farming in northern New Mexico, especially in subsistence operations. Since the end of World War II the rural Hispano social and economic system of small farming villages and extended families has declined to the point of near vanishment. In San Miguel County, where such a culture was established late compared to the Rio Grande Valley settlements, the decline of farming villages is almost complete, with a few thousand acres of irrigated land supporting very few people in the few viable villages left along the Pecos, the Canadian, and one or two of their tributaries. Ruins of villages abandoned since 1945 now stand in the midst of large cattle ranches, stark monuments to cultural and economic succession of the more adaptive

extensive use of the land by ranchers, Anglo and Hispano.

Of interest in comparing 1950 rural-farm figures with 1960 rural-farm figures is the change that came about when the definition of farm shifted from the earlier, more subjective criterion whereby the respondent was called a farm resident if he said he was a farmer, to the much narrower and more objective definition of farm residence in terms of cash sales of agricultural products in the year before the census. Many people think of themselves as farmers, when, by any economic yardstick, they are not this at all. In ecological terms, they may feel that as agriculturists they have adapted successfully to the environment, and yet they obviously have not.

Related to employment and occupation is the matter of income. Bearing in mind that subsistence farming is a negligible factor in the economy of the county today, just as is dependable, successful raising of food crops for home consumption to supplement income, cash incomes from sales, wages, and other payments is what most people have to depend upon in San Miguel County in modern times. The county is a low-income area, with the median family income of $2,905 in 1959. The figure for rural-farm families is nearly the same, $2,933 in 1959. The amount for all rural families is even lower, $2,221, as would be expected, given the high unemployment rate of the non-farm segment. The rural non-farm median for 1960 was $2060 per family. Table II shows the percentage of families in various income brackets for both 1959 and 1949. Statistics on family income for 1949 were not segregated from those for unrelated individuals, so that the incomes are slightly lower than is the true case. However, the

Table II, Rural Income in 1949 and 1959, San Miguel County, N. M.

	1949		1959	
	rural farm	rural nonfarm	rural farm	rural nonfarm
No. families (1959)			356	1,318
No. families and unrel. indivs.(1949)	1,180	1,785		
Income Range				
Under $1,000	42.3%	58.6%	9.55%	27.3%
$1,000 - 2,000	27.5	19.0	27.0	21.6
$2,000 - 3,000	12.3	9.25	13.7	17.6
$3,000 - 4,000	5.93	5.88	17.7	8.41
$4,000 - 5,000	1.27	1.40	12.6	6.66
$5,000 - 6,000	0.846	1.68	3.65	7.65
$6,000 - 7,000	2.96	0.840	2.52	2.58
$7,000 -10,000	1.69	0.280	7.01	5.76
Over $10,000	1.27	0.840	6.17	2.35
Not reported (1949 only)	4.66	2.24		

Source: U. S. Bureau of Census Reports on Population, 1950 and 1960

statistics can readily be compared, especially since there are many large changes in proportions over the decade. In 1959 median incomes for families and unrelated individuals were: rural farm, $2,615; and all rural, $1,505. No rural nonfarm figure could be calculated since no breakdown by income ranges for families and related individuals

was available for this group in the 1960 Census. The corresponding statistics for 1949 income for families and unrelated individuals were: rural farm, $1,250; rural nonfarm, $703; and all rural, $940.

Most of the census data presented in this table is self-evident; the general decrease in proportion and actual number in low income groups, the increased general income with greater national prosperity and inflation. What is not readily explained is the increase in higher income groups among the rural nonfarm population over the decade. Although no information has been sought specifically explaining this, it appears that many people of this high income range have moved out into the countryside from Las Vegas, creating a suburban-rural subgroup in the population which the broad categories of census reports do not denote. If the suburbanite conforms to the rural-farm census definition, growing some hay, a few head of cattle, or other products for sale, then he is not non-farm. However, most suburbanites do not have any commercial farming, and thus would account for some or all the increase in high-income rural non-farm population. In the $6,000 to $7,000 group, for example, the increase is great, from 30 families and unrelated individuals in 1949 to 101 families in 1959.

Leaving aside this special instance, in general the rural farm population has remained higher in income than the rural non-farm part of the population. Although both groups have obtained greater income in 1959 than 1949, the much larger rural nonfarm group continues to have a smaller proportion in the highest income categories and a

larger one in the lowest. In percentages, but not in absolute numbers, the rural-farm population has a larger share of families of low income, but not the lowest income. Thus, in the ranges, one to two, two to three, and three to four thousand dollars a year income, the rural non-farm segment accounts for, respectively, three times as many people, nearly five times as many, and slightly less than twice as many people as does the rural-farm segment. In all income groups there were more nonfarm than farm families in 1959, but as the figures in Table II demonstrate, the rural-farm group is far more heavily represented in the highest income group, over $10,000, with 22 such families out of a total population of 356 families, as compared to 31 rural non-farm families having this income out of a population of 1,318 families. There seems little doubt that nearly all of the higher income rural-nonfarm people live in rural suburban areas of Las Vegas, or are higher income merchants or professionals in small communities classed as rural by census analysis.

Level of Education

There are noteworthy differences in level of education between the rural farm population and other rural dwellers. The median years of school completed for rural-farm residents age 25 years and older was 8.3 years in 1960. That of the whole county was 8.1 years. The total rural population level of education median was 7.3 years indicating that the rural nonfarm segment's level of education was lower than that of the rural farm group. The same general relationship existed between levels of education in the

1950 census statistics, although the difference was smaller because the 1950 rural-farm population included people classified as rural non-farm in 1960. The rural-farm level of education was 5.8 years in 1950, the rural nonfarm level 5.6 years. In any case, type of residence has made for less differences in education level than has the passage of ten years. The less well-educated have either moved out of the county, or, especially among older people, died and permanently left the population. The statistics on education are for all persons 25 years of age or older, as is the following table showing changes in education level of the rural-farm population from 1950 to 1960.

Table III - Changes in Education Level, Rural-Farm Population, People 25 years and older, 1950 to 1960, San Miguel County, N. M.

Level of education	1950	1960
Persons 25 years and older	2,215	778
No school years completed	180	48
Elementary: 1 to 4 years	740	128
5 and 6 years	415	123
7 years	165	44
8 years	245	147
High school: 1 to 3 years	175	104
4 years	160	100
College: 1 to 3 years	45	50
4 years or more	45	34
School years not reported	45	none

Source: U. S. Census of Population, 1950 and 1960.

With the change in definition of farm, and the accompanying decrease in numbers, there has been an obvious increase in level

of education. Many of the people with a low level of education apparently were not truly commercial agriculturalists. This, if true, indicates that commercial farmers, including cattle ranchers, have a higher level of education than the general rural population. As will be seen in a more detailed discussion of ranchers, this assumption is generally true.

Rural-farm Housing

Although census material on housing in rural areas is very limited, sufficient has been obtained from published reports to be of value as background for the present study. With changes in definition of farm and non-farm segments of the population in 1960, earlier data are, as in the case of previously discussed demographic material, of value only because they give an idea of the trends. Just as the population figures show about a third as many rural-farm dwellers in 1960 as in 1950, so the number of housing units classified as rural-farm is one third that of the previous census. Of more importance than the changes over the decade, difficult to determine from the census data, are the differences between rural-farm and rural-nonfarm. These are demonstrated from the 1960 census data.

The total number of occupied rural dwellings in 1950 was 2,543, and 1,919 in 1960, a decline of 624 or 24.6%. But the decline in rural-farm dwellings for the same period was from 1,184 to 389, 795 units, or 67.0%. It is hardly likely that this difference in decline stems from abandonment of farms alone.

A large factor is the removal of farm designation by census redefinition. This conclusion is strengthened by the fact that the number of occupied rural nonfarm dwellings increased from 1,359 in 1950 to 1,530 in 1960, a change of 12.7%.

Of the 389 dwellings classed as rural-farm in 1960, 285 were owner occupied and 104 were renter occupied, or 73.2% and 26.8%. Rural non-farm dwellings the same year were, from a total of 1,530 occupied units, 1,186 owner occupied and 344 renter occupied, or 77.5% and 22.5%. There does not seem to be much significance to this small difference, especially since further research has shown that nearly all cattle ranchers own the homes they live in.

There is a difference between these two types of rural dwellings that may have some significance. The median number of rooms per dwelling was 4.4 for farm dwellings and only 3.4 for non-farm dwellings, making farm houses generally considerably larger than rural nonfarm houses. Further, the median number of persons per dwelling was higher for nonfarm than for farm rural dwellings, 3.9 as compared to 3.4. Thus, not only are non-farm rural dwellings smaller, but they house more people and are more crowded.

Condition of housing is also noticeably different, in general terms, between rural farm and nonfarm. 313 farm houses were classed as sound, and 76 as deteriorating, none as dilapidated, for percentages of occupied dwellings of 80.5% and 19.5%, respectively. Rural non-farm dwellings were rated occupied and vacant together, with a total of 2,632 dwellings, 1,102 being vacant, 489 year-round dwellings and 613 seasonal, probably mainly summer resort

homes. 102 of the year-round dwellings were dilapidated, the remainder were classed as sound or deteriorating in a single category. Of all units, 1,876 were considered sound, 625 deteriorating, and 131 dilapidated, yielding 71.2% sound, 23.8% deteriorating, and 4.98% dilapidated. It appears from these statistics, granted that they are not strictly comparable, that rural-farm housing is slightly superior in condition to rural nonfarm housing. Recalling the generally higher income of rural farm people, such a difference would be expected.

Comparison of what might be called the "amenities" of modern American culture, indoor plumbing and central heating, show further the superiority of farm as opposed to nonfarm rural housing. For example, 160 rural-farm dwellings had all plumbing facilities, 41.1% of these units. But only 627 of all rural nonfarm units, or 23.8%, had all such facilities. Only 148, or 38% of the rural-farm houses had no running water, either inside or outside, while 1,272 or 48.2% of the rural nonfarm had no such water supply. It should be added that the decrease in rural-farm dwellings with no piped water from 982 in 1950 to only 148 in 1960 also shows that many rural-farm dwellers had installed piped water during the decade.

In terms of specific plumbing facilities the rural-farm dwellings had nearly twice the percentage of modern conveniences, bathtubs or showers, flush toilets, individual wells or water companies as water sources, and septic tank or cesspool, with about 46% having these compared with about 26% of rural nonfarm

dwellings having them. Actually a larger proportion of both groups had well or company water, with 83.8% of the farm and 52.3% of the nonfarm dwellings thus accounted for. The same relation of almost twice as many for the farm dwellings holds, however. Water companies supplied water for 28.7% of the nonfarm dwellings, but to none of the farm dwellings. This indicates that a large number of nonfarm houses are in villages with community water supplies. Outhouses are still the most common method of sewage disposal for both types of housing, although only 54.0% of the farm dwellings had this method, while 76.5% of the nonfarm had it.

By 1960, and certainly at the present time, most rural dwellings have electricity. But in 1950 only 425 out of 1,184 rural-farm dwellings had it. By 1960, to give an example, 178 farm houses had home food freezers, 45.7% of all occupied units, while only 226 out of 1,530 occupied nonfarm dwellings, 14.8%, had such an appliance.

Age of structure and year present occupants moved into the unit show only slight differences between rural-farm and rural-nonfarm dwellings. Nearly half of both types of dwellings were over 30 years old. Slightly smaller percentages of nonfarm dwellings were in the 5 to 30 year groups, and slightly more were in the newer, less than five years old category.

About a third of both types of dwellings were occupied by their residents in 1939 or earlier. Another third of the occupants had moved in from 1940 through 1953. A sixth had occupants move in from 1954 through 1957, and another sixth from 1958 through March of 1960. While there were differences in dwelling tenure between

owners and renters, there was only slight variation between farm and nonfarm residents in periods of tenure.

Nearly half the owners, in both types of dwellings, had moved in before 1940. Close to another half had moved in between 1940 and 1954. With renters, the situation was quite different in both types of dwelling. Over a third had moved into their quarters since 1958. Only about 10% of the farm and about 20% of the nonfarm residents had moved in before 1940.

There was a noteworthy difference in status of renters between farm and nonfarm dwellers. 92.3% of the farm renters paid no cash rent, while 62.3% of the nonfarm renters were in this class. Presumably many, if not all the farm renters received a dwelling as part of their wages, or as their use-share of family-owned property. This was far less the case, as the figures show, for the nonfarm residents than for the farm residents. Many ranches, for example, furnish family quarters for their help. Those that are strictly family owned and operated, furnish all adult, married children with family quarters, especially if these children, usually the sons only, work on the ranch.

Population of Subdivisions of the County

Until 1960 all decennial census reports gave population characteristics for the minor political divisions of the county, the precincts. In 1960 a new system of census districts, in no way related to precinct boundaries was used. Unfortunately, this has made it impossible to bring changes in specific rural areas

up to very recent times. Figure 13, U. S. Census Divisions, 1960, shows the approximate boundaries of these new districts, together with the populations of these districts. Aside from the Las Vegas division, which includes all the urban population of the county, the main concentrations of population are along the Pecos River, in the older Hispano villages, with 2,761 in the Pecos division and 1,982 in the Villanueva division, and similar older settlements along the Sapello River in the Las Vegas North division. The population of 3,195 of this last division includes many people who live in suburban settlements of the Las Vegas urban area. The remaining three census divisions each have less than a thousand residents, and are by far the largest divisions in land area. They also are the areas in which most cattle ranching operations today are located, coinciding very closely with most of the Plateau area and all the Plains area of the county. It should be noticed that the absolute number, as well as the density of population, decreases as one moves eastward across the county from Las Vegas. The Plateau and Plains areas were also the areas of greatest homesteading activity in the early part of the twentieth century.

Looking at specific areas relevant to the discussion of change in land use from dry farming to cattle grazing, the census data to 1950 show a general decline from 1900 onward. The one exception to this decline is the temporary increase, in many areas large, in population between 1930 and 1940, as unemployed people moved back to the farm during the Depression. Table IV, Changes in Population of Rural Farming Areas, 1900-1950, shows changes

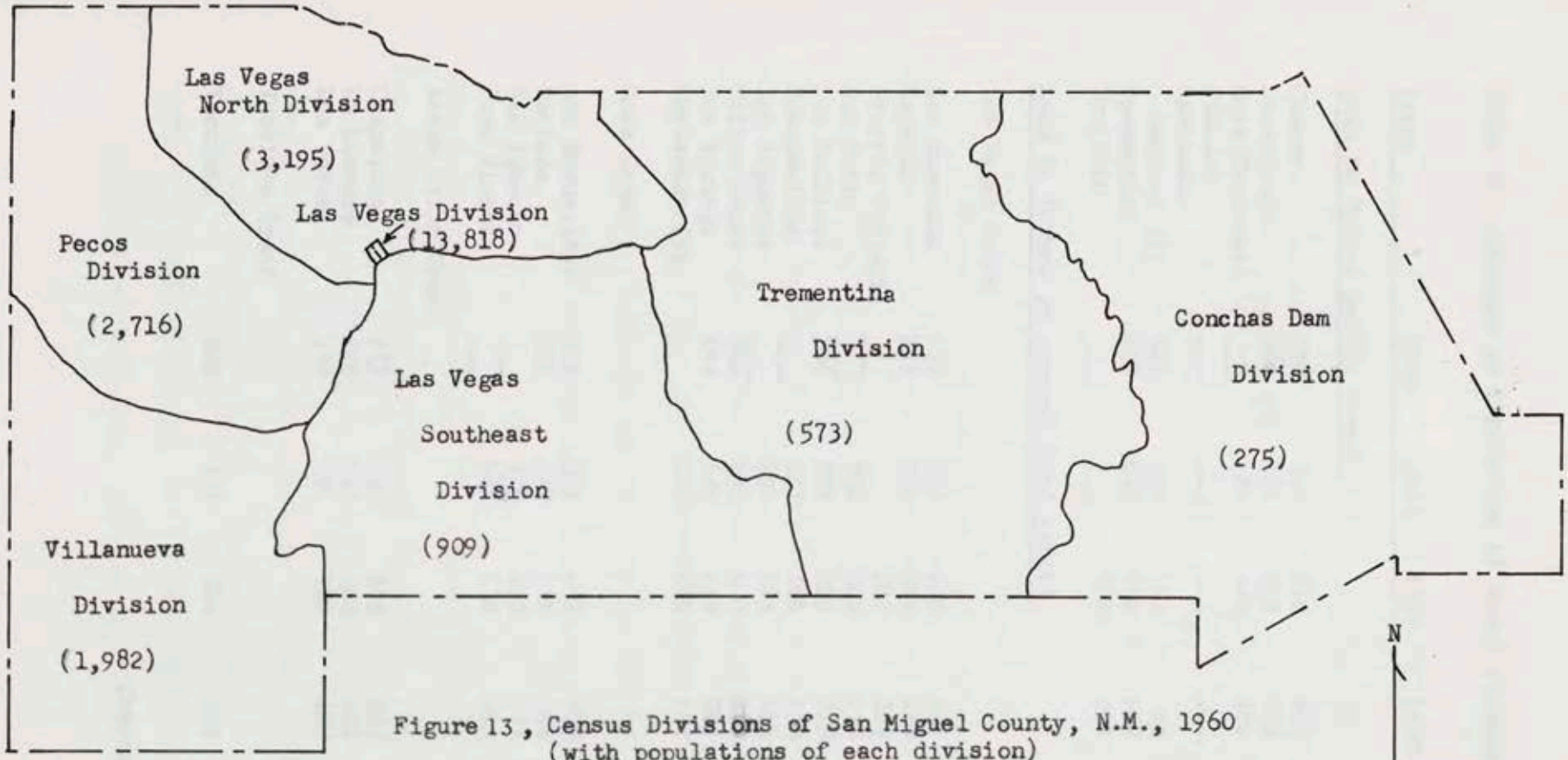


Figure 13, Census Divisions of San Miguel County, N.M., 1960
(with populations of each division)

(data from U.S. Censuses of Population and Housing:1960.
Census County Boundary Descriptions, New Mexico PHC(3)-11)

Scale in miles

10 0 10 20 30

Table IV - Changes in Population of Rural Farming Areas, 1900-1950

Areas	1900	1910	1920	1930	1940	1950
Land in former public domain						
Chavez	297	417	518	455	367	188
Cherryvale	340 (1)	177	293	105	75	(2)
Maes(Encinosa)	—	591	448	106	125	86(2)
Rencona	—	—	—	—	171	30
Sabinoso-Sanchez (3)	354	448	263	69	202	152
Trementina	653	613	605	667	526	409
Trujillo	—	—	368	301	353	266
Land in former or present land grants						
Las Vegas Grant						
San Geronimo	536	562	426	321	245	169
Sapello	351	285	254	169	313	125
Storrie Project	—	—	207	209	211	205
San Pablo	—	278	204	177	134	93
Las Gallinas	394	392	253	229	374	249
Romeroville	—	227	166	130	175	215(4)
San Augustin	—	201	223	165	189	109
Ojitos Frios	301	230	187	188	153	71
Hot Springs	244	149	240	204	198	85
Emplazado (5)	—	248	185	131	161	167
Mora Grant						
Las Manuelitas	304	303	207	209	211	205
Rociada	298	267	240	164	313	125
San Ignacio	—	307	259	178	153	135
Pena Blanca	—	181	174	152	26	67
Anton Ortiz Grant						
Chaperito	373	333	344	183	254	174
La Liendre	459	341	300	122	105	14
Los Torres	279	105	112	102	—	—
Tecolote Grant						
Tecolote	508	393	431	275	307	358

Continued on next page

Table IV - Changes in Population of Rural Farming Areas, 1900-1950, Cont.

Areas	1900	1910	1920	1930	1940	1950
San Miguel del Bado Grant						
San Miguel	450	426	285	217	192	108
San Juan		264	274	333	281	207
San Jose	606	544	426	556	613	321
Ribera			311	327	303	231
Puerticito	498	301	245	247	324	175 (6)
La Cuesta	489	471	592	466	560	317
El Cerrito	136	306	165	118	136	54

Source: U. S. Censuses of Population for years listed.

Notes to Table IV, Changes in Population of Rural Farming Areas

(1) Cherryvale with El Aguilar in 1900

(2) Cherryvale combined with Encinosa in 1950

(3) Sabinoso and Sanchez returned as one precinct, and enlarged in 1950

(4) Romeroville lost part to another precinct in 1942

(5) Emplazado includes another precinct in 1950

(6) Puerticito lost part to another precinct in 1950

in precinct population for the areas of greatest farming activity as determined by the examination of aerial surveys.

Practically without exception these rural farming areas lost population in large numbers between 1900 and 1950. Those areas which lost the least, even had a fairly constant population, were the places with large areas of irrigated farms. Cherryvale, a late dry farming settlement, disappeared completely from census

statistics by 1950. Today La Liendre, even though it had an extensive irrigation system, is completely abandoned.

Except in the Pecos River region, the San Miguel del Bado Grant, only a little farming, that may be considered part-time activity, goes on. The largest and most persistent villages are located in this grant and at Pecos, upstream. This village has had a population of slightly more than a thousand for the whole period from 1930 to 1950, with about half that number before 1930. Even this village dropped to only slightly over 500 by 1960, however.

Although statistics on precincts or individual villages, essentially the same because of the typical Hispano rural settlement pattern, are not available for 1960, there is every reason to believe that all of these villages and precincts have declined greatly in population with the large emigration of rural people of the county between 1950 and 1960. Ojitos Frios, for example, had only three occupied houses when it was investigated in the course of this research in 1964, and can hardly have more than a third of its 1950 population of 71. The same may be said for San Pablo, which had 91 people in 1950, but only two occupied houses in 1964.

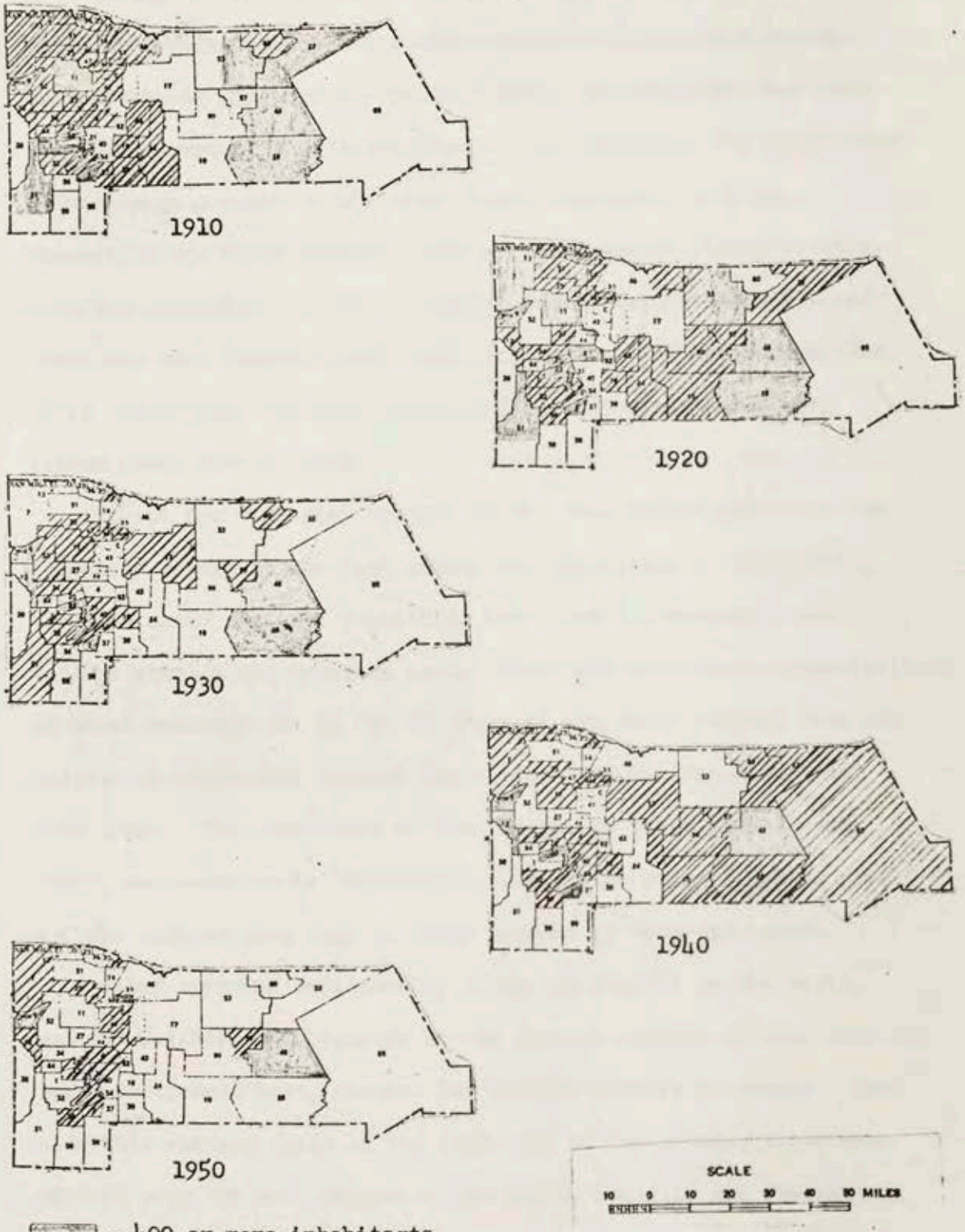
At least one series of villages have disappeared and become a part of extensive ranch holdings. These are three villages on the Gallinas River, Los Torres, Chaperito and La Liendre. The ranch owner allows some employees to live in Chaperito still, but most of the village is in ruins, including the church. Other examples of the general decline in rural Hispano villages could

be given for any area of the county, save the exceptions listed along the Pecos River. Even these have lost population, and probably either lost pasture land to ranchers or had cropland consolidated in larger farming plots for use by remaining residents.

The changes in rural population areas show clearly in Figure 14, which depicts graphically precincts, the minor political divisions of the county, of high, moderate and low population. Although there were some changes in number and size of precincts between 1910 and 1950, the variations were small and often occured in precincts of continued low population. However, because the precincts are not uniform in size, the population distribution among the precincts is not strictly a representation of population density. What is important for the present study is clear from these maps, and this is the general change over a forty year period from large numbers of rural residents to very few.

In 1910, when the homesteading movement was beginning its most active period, the whole western third of the county was well populated. Also the public domain between the central land grants and the Pablo Montoya Grant showed a relatively high population. In 1920 the rural population had spread out over the old western grant lands, filling up practically all the county outside the Montoya Grant. But by 1930 this rural population had contracted drastically, with only about half the rural areas now having populations of over 200 people per precinct. This expansion in the second decade of the century and the following contraction in the third decade is also reflected in decreases in agricultural activity discussed later.

Figure 14 : Changes in Rural Population in San Miguel County, 1910-1950, by number of inhabitants in precincts
Source; U.S. Censuses of Population for years given



During the 1930's there was a movement back to the rural areas. While the shift did not bring about quite as intensive settlement as in 1920, it was an increase over 1930. By 1950, the last year for which precinct population figures are available, the rural areas of once high population had been almost deserted. Only the Trementina and Pecos precincts had over 400 people living in them. With the population of Pecos village decreasing between 1950 and 1960, and with Trementina village completely abandoned before 1964, it is likely that the distribution of rural population is more sparse today than in 1950.

Except for the brief venture in dry farm homesteading and the temporary return to the land during the Depression in the 1930's, the main areas of rural population have been the western river valleys outside the mountain area. Today the only large concentrations of rural dwellers are in the villages of the Pecos valley, from the village of Pecos down through the villages in the San Miguel del Bado Grant. The population of this region is lower than in past years, and seems to be decreasing still as the younger people move out for lack of farm land or other sources of work and income.

Other riverine settlements, along the Sapello in the north, and the Gallinas and Tecolote in the central portion of this western rural settlement belt, account for smaller numbers of people. Outside this western third of the land area of the county, there were in 1950 only two well-populated precincts, Trujillo and Trementina. In 1960 the whole Trementina Census Division, which included all of both these precincts and much more, showed only 573 inhabitants.

As was noted before in discussion of the populations of these and the other 1960 Census Divisions, the chief rural population concentration is in the western third of the county. The eastern two-thirds of the county have about 10% of the county's population, and nearly all the good ranch lands and successful operations. It took at least thirty years for the people to make the discovery, but this large Plateau-Plains region is not suitable cropland. Its original use, grazing land for wild or domesticated herds, is its most efficient and adaptive use. But hope springs eternal, and many are not yet convinced that this is not the farmer's paradise yet to come to pass.

CHAPTER IV

HISTORY OF LAND USE IN SAN MIGUEL COUNTY

Central to the field of ecology is the idea of succession of life forms in a given habitat. This chapter describes the many attempts by man to adapt to the semi-arid environment of San Miguel County. It is a story of the ultimate failure of dry farming, which had earlier eliminated by fenced homesteads sheep ranching on public domain. The line of succession passed to the cattlemen during the 1920's, where it has stopped, at least for the moment. There can be little doubt that cattle grazing is a more adaptive mode than was dry farming of small grains. What is interesting is that such relative success has been taken by nearly all cattlemen to mean that ranching methods that worked better than farming need no change. They have become technological conservatives. With the environment becoming less hospitable to traditional ranching, such conservatism is an inappropriate response. Yet the history of land use in the county confirms to most ranchers that they have a means of mastering the environment, and that this means needs no improvement. Their relative success compared to farming homesteaders holds them captive.

European settlement in this county did not occur until the last decade of the eighteenth century. The settlements of that time were entirely along the Pecos River just below Pecos Pueblo and were deliberately placed there to act as military outposts to protect the Rio Grande settlements around Santa Fe from attacks

by Comanches and other marauding bands from the Southern Plains. There are mixed accounts of who these Pecos valley settlers were, but there is general agreement that the settlers were a few Spanish soldiers and a large number of "genizaros," interpreted as being either "Indians of mixed blood,"[1] "Christianized local Indians rejected by their tribes for becoming converted,"[2] or "Tlascalan Indians, the descendants of Mexican Indian servants the Spaniards brought with them during the Reconquest in 1693."[3] Very few of the present-day descendants of these early settlers will admit to anything other than pure Spanish ancestry, but the historical records, church and secular, belie this. In any case, the settlements, beginning with San Miguel del Vado in 1794, were basically self-sustaining militia outposts of a rapidly declining Spanish empire in the New World. The small area of irrigable ground on the valley floor was cultivated for subsistence crops and the immediately surrounding hillsides and mesa-tops were used for pasturing some sheep and a very few cows. All the land outside these valleys was dominated by Comanches and by their foes, the allied Jicarilla Apaches and Southern Utes. Bison herds populated the Southern Plains and conflict between these two groups was mainly over hunting territories.

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[1]Reynaldo Crespin, "San Miguel del Bado" (Papers on the Southwest, compiled by Lynn I. Perrigo, Las Vegas, N.M., 1963, unpublished).

[2]Milton W. Callon, Las Vegas, New Mexico, The Town that Wouldn't Gamble (Las Vegas, N.M.:Las Vegas Publishing Co., 1962), p. 4.

[3]C. de Baca, op. cit., pp. 77-78.

European intrusion into the open plains was slight, being limited in the early nineteenth century to occasional campaigns against Indian raiders or well-organized buffalo hunts by "ciboleros," usually employees of large sheep ranchers of the Upper Rio Grande area. These ciboleros sought both hides and meat, the latter made into jerky as soon as the animals had been butchered.

Don Luis Maria Cabeza de Baca attempted to establish a livestock ranch at the present site of Las Vegas in 1823.

> He took possession of the land and lived there for a number of years. He had great dreams of an empire in the name of Cabeza de Baca, but the Indian raids from the north made it impossible for him to continue living on the land which consisted of half a million acres. . . . the boundaries as claimed were: on the north, the Sapello river; on the south, San Miguel del Vado; on the west, the Pecos mountains; on the east, El Aguaje de la Yegua and the Antonio Ortiz Grant. . . .[4]

It was not until 1835 that a group of settlers from San Miguel del Vado obtained from the Mexican government nearly the same grant of land and successfully founded a permanent community, basically a subsistence farming-ranching group, on the Vegas Grandes. The area was an exceptionally fine one, of good grass, roughly coinciding with the Plateau Zone of this research, the central third of modern San Miguel County. Other settlements were made in this Mexican period in both the older San Miguel del Vado Grant and the new Las Vegas Grant, but only in the western part of this heavily-grassed Plateau area and the mountain valleys, away from and high above the Plains to the

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[4]C. de Baca, op. cit., p. 80.

east.

The establishment of a community at Las Vegas, the full name being La Plaza de Nuestra Senora de los Dolores de Las Vegas, The Town of Our Lady of Sorrows of the Meadows, was made attractive by the vigorous trade that was developing along the Santa Fe Trail after it was opened to commerce following Mexican indepdendence from Spain in 1821. In fact, communities sprang up all along the trail at this time and after American annexation, each settlement about a day's freight wagon journey, about 10 miles, from the others. Of these way stations, only Las Vegas remains as a viable community today. The rest are in ruins or inhabited by only a few people. With the increasing use of the Trail, agriculture became more than subsistence, since fresh provisions were welcomed and paid well for by wagon trains after the long haul over Raton Pass and then a hundred more miles of trail. Before this time only seldom was there any trade with other regions. Occasionally a large herd of sheep followed the Camino Real out of northern New Mexico southward along the Rio Grande to the markets of Chihuahua in Mexico.

Early American Period

After 1846, with American annexation during the Mexican War, western and central San Miguel County became increasingly commercial and market-oriented in its agriculture. Fort Union was established in 1851, some twenty-five miles north of Las Vegas to protect the two branches of the Santa Fe Trail, the older, western, mountain branch, and the new Cimarron cut-off, which

well fitted its name, the "dry route," and was vulnerable to Plains Indian attacks. Lumber, wheat, beef, mutton, and other products were constantly in demand at the Fort. The local farmers and ranchers, nearly all of Hispano ethnic identity, did not usually deal directly with the Army procurement people, but through what Parish and earlier writers have called "mercantile capitalists."[5] Many of these men were famous traders from Taos, a town that had lost its commercial importance with the opening of the Santa Fe Trail. Before this it had been almost a "freeport," where Spanish, Indian, and American met to trade. Names like Ceran St. Vrain now appeared as growers of crops and as middle-men for the always-hungry troops and horses at Fort Union. Parish in his book, The Charles Ilfeld Company, gives an excellent account of the operation of these trading companies, which took local agricultural products and turned them into cash deposits either at a military post or at an eastern center such as St. Louis or Philadelphia, all the while only offering credit on finished goods such as cloth, flour, harnesses, and tinware to the small-scale Hispano agriculturist. Gradually, these people were brought into the cash economy of the United States, coming to depend on other than their own labors and traditional barter for basic necessities of life, and acquiring a taste of "higher things," a process usually termed "raising their standard of living." Many of these small farmers ran up accounts they could never pay off, and lost control of their land when finally closing

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[5] William J. Parish, The Charles Ilfeld Company (Cambridge, Mass.: Harvard University Press, 1961).

accounts. Exactly how many lost their share of land grant or later homestead sites this way is not known yet, but, as Parish so well put it:

> Unlike the bloodshed which such a change caused in London in the riots of 1327, and in later years in various commercial centers across the Continent, no explosions occured in New Mexico. The smoldering resentment of docile people, however, can in the long run be most dangerous. The idea is not without foundation, though perhaps it embodies some exaggeration, that the more difficult social problems of present-day New Mexico can be traced to this economic change which began in the 1850's and accelerated through the balance of the nineteenth century.6

While western San Miguel County and also western Mora County sold their agricultural products to the Army at Fort Union, the troops of that fort, following the Civil War, were busy subduing and sending off to distant reservations the Plains and other Indians who had made permanent settlement or even regular livestock grazing nearly impossible in the eastern half of the county. By the early 1870's people began moving out into many likely places in the area east of the Vegas Grandes, at the lower elevations along the streams of the Plains zone of the county. Such communities as Sabinoso, on the Canadian River, were settled at this time, according to informants. These settlements were set up as typical Hispano irrigation farming and small-scale livestock ranching communities, similar to those established earlier on the Pecos. Nearly all these new settlements were outside the boundaries of the Las Vegas Grant and the other land grants of the county. Maps of the period show few dwellings on these land grants. This

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[6]Parish, op. cit., p. 45.

eastern movement was mainly by people already living in the region, an adjustment of population from crowded riverine areas of the Pecos, Gallinas, Tecolote and Sapello valleys.

> After the Indians were rounded up and put into reservations, it became safe for the sheepmen to take their families into the Ceja and Llano country.
>
> Families from Las Vegas, Mora, Antonchico, some from the lower Rio Grande valley and many from settlements along the Pecos river, joined the caravan of settlers into the land of the buffalo and Comanche.[7]

These people did not usually file for government homesteads, but merely settled in vacant areas with possibilities of irrigation. As Parish has pointed out, in the whole Territory of New Mexico there were no claims filed prior to 1873, and only 90 in the whole state prior to 1881.[8] These settlements utilized only a small area within the eastern half of the county. Sheep operators did move sizeable flocks into much of the open range of the public domain and the land grants after the removal of the constant threat of Indian depredations. The number of sheep in the county increased sharply after the Civil War, with nearly 200,000 head in 1870 and 380,000 in 1880. The sheep men were mainly well-to-do Hispano, with many of the sheep let out on shares under the partido system, an old Hispano arrangement that became a common pattern in the Territory by the time of American annexation. Trustworthy herders were given the risk and responsibility for herds of 1,000

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[7]C. de Baca, op. cit., p. 68.

[8]Parish, op. cit., p. 174.

to 2,500 sheep, returning to the patron-owner the original number of sheep, of the same age, sex, and condition at the end of five years. Any additional sheep could be kept by the herder, and it is claimed by several writers that many herders became prosperous owners of their own herds of sheep in this manner. Other writers claim this seldom happened.[9]

Beginning of Large-Scale Ranching

A major event of the late nineteenth century which changed land use in San Miguel County permanently was the building of the Santa Fe railroad to Las Vegas. This occurred in 1879. The most obvious change was a rapid increase in the number of livestock, not only sheep as noted before, but also beef cattle. Las Vegas became a railhead for the livestock industry, being much nearer to the grazing lands of eastern New Mexico than were the old railheads of Dodge City and other cities in western Kansas. The number of beef cows, not including steers, calves, yearlings or bulls, in the county rose from less than 5,000 in 1870 to slightly more than 20,000 in 1880. While there is no good history of ranching in New Mexico and specifically none for San Miguel County, references to the growth of the range cattle industry in New Mexico in the standard works on the history of the western range cattle industry indicate that New Mexico shared in the boom in

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[9]Sanford A. Mosk, "The Influence of Tradition on Agriculture in New Mexico," Journal of Economic History, 2, supplementary vol., supplementary title, The Tasks of Economic History, Dec. 1942, pp. 34-51.

cattle that filled the open range of west Texas, Colorado, Wyoming, and Montana after the Civil War. Judging by the lack of recorded conflict between Texas cattlemen and New Mexican Hispano sheepmen over occupation and control of the range until the last decade of the 19th century and the early years of the 20th century, it appears that these eastern cattle and their owners did not move into New Mexico, at least into San Miguel county, until some time after the railroad came to Las Vegas in 1879. The number of sheep declined rapidly after 1900, while the number of cattle increased steadily until a peak was reached in 1925, when approximately 38,000 mother cows were grazing in the county.

The reasons for this shift from sheep to cattle are complex and will be dealt with later, but they do show that San Miguel County was not occupied by cattle and cattlemen, Hispano or Anglo, until later than the period we are now dealing with, the two decades following the Civil War. The only evidence of really large scale cattle operations during this period in the county is Wilson Waddingham's purchase in 1870 of the Pablo Montoya Grant and making it into the Bell Ranch. This was a huge parcel of land approximately 36 miles by 30 miles in size. Again, there is no history of even this large operation. There were many large cattle companies in New Mexico at this time, but a survey of writings on these show they all were in areas north or south of the present area of the county, in the Clayton and Fort Sumner areas, and near the Texas border.

E. E. Dale in The Range Cattle Industry, 1865-1925, summar-

ized this period for New Mexico thus:

> The development of the cattle ranching industry in New Mexico presents nothing new in the history of that business and may be dismissed with a very brief sketch. While cattle ranching became very important there, New Mexico's pre-eminence early lay in sheep raising. In this industry its importance was almost equal to that of Texas in the cattle business, since from the New Mexican ranges were drawn millions of sheep to stock the northern plains and large areas in the Rocky Mountains, as well as in Texas and the Pacific Coast states.
>
> While cattle were doubtless raised in New Mexico by the early Spanish inhabitants, cattle raising did not assume any considerable proportions there until after the Civil War. About 1865 there was a large number of troops, together with about 10,000 Navajo Indians, gathered at Fort Staunton, and many herds of cattle were brought from Texas to supply them with beef. As more were brought than were needed, some of the surplus animals were driven to Colorado and others were placed on ranges in northeastern New Mexico. The Indians of the Texas Panhandle were at first a source of great annoyance, but their raids were finally checked by expeditions of the New Mexico ranchmen, and the cattle industry steadily grew.
>
> Many herds were brought in from Texas over the old Goodnight Trail and pastured on the public domain of northeastern New Mexico, the ranchmen seeking control to the water supply by means of homesteads along the streams or by purchase of railroad lands and territorial school lands. Much of the plains area and nearly all of the southern portion of the territory remained unoccupied until several years later owing to the lack of water supply and the depredations of Indian and Mexican marauders.
>
> As the Panhandle of Texas was occupied by the ranchmen, some of them crossed over into New Mexico and established ranches. By 1880 it was stated that some of the northeastern counties were overstocked, and that the range was by no means so good as it had been five years before. . . .
>
> The lack of rainfall in New Mexico prevented the great influx of homesteaders that came to so many of the states formerly largely given over to grazing, and while some small areas were made very productive through irrigation, a large part of the state seems to be a permanent grazing region.[10]

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[10] E. Dale, op. cit., pp. 119-121.

The disastrous winters of 1885-1886 and 1886-1887, when blizzards depleted the herds of cattlemen of the Plains states, were muted in their fury in New Mexico, causing only slight declines in number of stock on the range. This, combined with the lesser cattle boom of the area, made the change in the number of stock on the range far less dramatic in San Miguel County than in areas to the east and north.

The Homestead Movement in the County

Contrary to Dale's statement that few homesteaders were on land in New Mexico, examination of the U. S. Land Office records in Santa Fe shows that beginning in the late 1880's and into the 1890's many people filed for and received patents on government homesteads in eastern San Miguel County. Most of these people were Hispanos. Their home areas are not mentioned in the records, but many had surnames the same as those of modern farmers and ranchers in the Sabinoso-Sanchez area, located northeast of the Pablo Montoya Grant, the Bell Ranch. This entire grant was fenced in by Waddingham in 1885 and all "squatters" were driven out at that time.

The Bell Ranch, occupying the entire eastern section of the county, no doubt acted as a buffer zone, causing the intruding Texas cattlemen to choose other areas of the plains to the north and south. The Canadian River runs diagonally through this enclosed large ranch, thus fencing out intruding cattle from the all-important water.

Pressure from homesteaders began in the last fifteen years of the 19th century. It did not reach a peak until just before World War I, but the effects were felt not only by Texan and other cattlemen, but also by the Hispano sheepmen. Although both these groups competed for the open range of the public domain, there was little direct conflict for the same land, little apparent scarcity of land, until parts of the public domain, large parts of it, were fenced off into quarter and, later, occasional half section homesteads. Despite the low annual rainfall and the unpredictability of even this, most of the homesteaders were successful enough using dry farming techniques to stay on the land a few years and acquire title to it. Today there is virtually no public domain left in the county, and very little state land either.

In only a few areas of the county were the homesteaders "Anglo." Most settlers were people from either the new settlements out on the Plains, mentioned earlier, or the older settlements of the county back on the Plateau and the Mountain Zones such as Rociada, Mora, and Las Vegas. Very few people settled on land in the several land grants of the midsection of the county, apparently preferring to move onto the Plains where they could obtain undisputed title to a modest homestead and take the risks that went with lower average annual precipitation. The titles to the land grants were not settled until the first years of the 20th century, through court actions. Much of the grant land, as in the Antonchico Grant, had already been lost through sales for back taxes or been given out in long-term leases for

grazing land to relatively large-scale Anglo cattlemen.[11]

While much of what Fabiola C. de Baca writes of Hispano life on the Plains, the Llano, is about land no longer in San Miguel County, once even larger than its present three million acres, her account of this intrusion of homesteaders and the results of this on the local sheep and cattle people is important, partly because it is the only good account of this change. The "Ceja" she refers to is the bluffs formation on the north rim of the Llano Estacado.

> The decision of the courts about land grants, the coming of the homesteaders, the railroad over the Llano and the building of highways, caused a transition in the history of the Ceja and the Llano. Amarillo and Tucumcari grew into cities and Las Vegas remained static, contented with one main highway and the crossing of the Santa Fe railroad through its boundaries. Many of its inhabitants little know that once it was the largest trading center in the vast State of New Mexico.
>
> With the coming of the railroad over the Llano, immigration started. Caravans of covered wagons dotted the country over the buffalo and Comanche trails. Another people came to settle where once the New Mexicans of Spanish extraction have lived, where they had found the promised land for their flocks and herds. Gone were the sheep and only a few cattle ranches remained.[12]

She is speaking of conditions just after the turn of the century, but the process of change in land use and, to a lesser extent in San Miguel County, in ethnic identity of inhabitants, was going on before this time and certainly continued after this time. The general picture is one of Hispano sheepmen replaced by Hispano and Anglo cattlemen and by homesteaders of both ethnic groups.

Much here anticipates developments not yet described.

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[11]Olen Leonard and C. P. Loomis, Culture of a Contemporary Community, El Cerrito, New Mexico (Washington, D.C.:Dept. of Ag.,1941).

[12]C. de Baca, op. cit., p. 145.

The period after 1890 saw not only the second railroad Fabiola C. de Baca speaks of, the Rock Island, in the area just south of the eastern part of the county, but the introduction of dry farming, and hundreds of homesteaders practicing it, onto the land, and the change from sheep to cattle as the dominant livestock. As has been noted, the coming of the railroads also hastened the coming of the homesteaders. And this in turn cut down substantially on the amount of public domain available as open grazing land. Many Hispano ranchers quit or sold out, while others shifted from sheep to cattle, as did Fabiola C. de Baca's father.

> The Hispano has almost vanished from the land and most of the chapels are nonexistent, but the names of hills, arroyos, canyons and defunct plazas linger as monuments to a people who pioneered into the land of the buffalo and Comanche. . . .[13]

> When the cattle companies and the homesteaders arrived, it was the survival of the fittest. Much of the land had reverted to the United States government. It was No Man's Land. The Llano became a cattle and farming country and a few foresighted Hispanos abandoned sheep and took to cattle raising on a small scale. . . .[14]

> All the ranchers had some cattle, but until late in the 1890's the Llano was primarily a sheep country. . . .[15]

> The Hispanos had almost no titles of ownership, and the few who did were not able to compete with the newcomers. The boundaries had been laid by means of indefinite markers and much of the land was lost even after it was taken to the courts. The history of the New Mexican land grants would fill volumes, but it is not a part of this story.

> Those who settled on the Ceja and the Llano took it for granted that the land was theirs. No other

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[13] C. de Baca, op. cit., p. 66.

[14] Ibid., p. 67.

[15] Ibid., p. 72.

> civilized people had become interested in the country until the New Mexican pioneers had made it safe for colonization.
>
> A few of the Hispanos who had taken advantage of the homestead law of 1862 by taking up 160 acres of land remained on the Ceja along the Pajarito country.[16]

She goes on to tell about the few persistent sheepmen who stopped in at the C. de Baca ranch in the early 20th century on their way to grazing lands east of the present San Miguel County, really outside the area under study, but showing the change in the area:

> Don Cruz Gallegos, from Upper Las Vegas, stopped at our rancho on his way to oversee his sheep camp near Endee as late as 1913. At that date there still was a handful of Las Vegas sheepmen trying to hold their grazing land, but one by one they gave up as the homesteaders took up the land.[17]

It must be remembered that much of eastern San Miguel County was a single enclosed ranch, the Bell, and neither dry nor irrigation farmers homesteaded there. But the areas east, north, and south of the Bell Ranch were settled by farmers, and even today large crops are raised in the areas around Roy and Tucumcari, using both surface and underground water as sources of irrigation. Such has never been the case in San Miguel County, even though many of these irrigated, prosperous farms are just a few miles away from the county's northeast and southeast corners. It is almost as if by accident the arbitrary boundaries were perversely drawn to exclude crop-growing prosperity from

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[16] Ibid., p. 73.

[17] Ibid.

San Miguel County. But, if there were today good farms in the county there would probably not be large cattle ranches in the area.

By and large, in San Miguel County homesteaders did not stay very long, perhaps only long enough to gain patented title to the land. But most of the eastern section of the county outside the land grants and the southwestern section were taken up in homesteads either in the late 19th or the early 20th centuries. A detailed survey of the U. S. Land Office records in Santa Fe showed that there were three periods of large activity in filing homesteads. In the 1880's and '90's, large numbers of people with Spanish surname filed and obtained patents, mainly, but not exclusively, in the east-central section, just west of the Bell Ranch, the old Pablo Montoya Grant. In the second period from about 1900 to 1917 there was another surge of filing and patenting of homestead lands, the difference from the first period being that many Anglo-American names appear along with a large number of Hispano names, presumably "native" New Mexicans. The third period of homesteading activity was from the mid-1920's to the mid-'30's, and was of much less intensity than the first two, probably mainly because there was very little public domain left and also because potential homesteaders had learned from the failures of previous homesteaders that one could not make a go of it economically in crop agriculture, commercial or subsistence. One of the reasons for any homesteading at all in this last period seems to have been the general economic de-

pression of the period, in which dry farming was turned to in New Mexico as a last chance, better than doing nothing at all, and a way to grow at least some food.

Homesteading activity was concentrated in five major areas of the county, in so far as actual intensive crop production took place on homesteads. In addition there was considerable purchase of land from the Las Vegas Land Grant for dry farming during one period, after 1900.

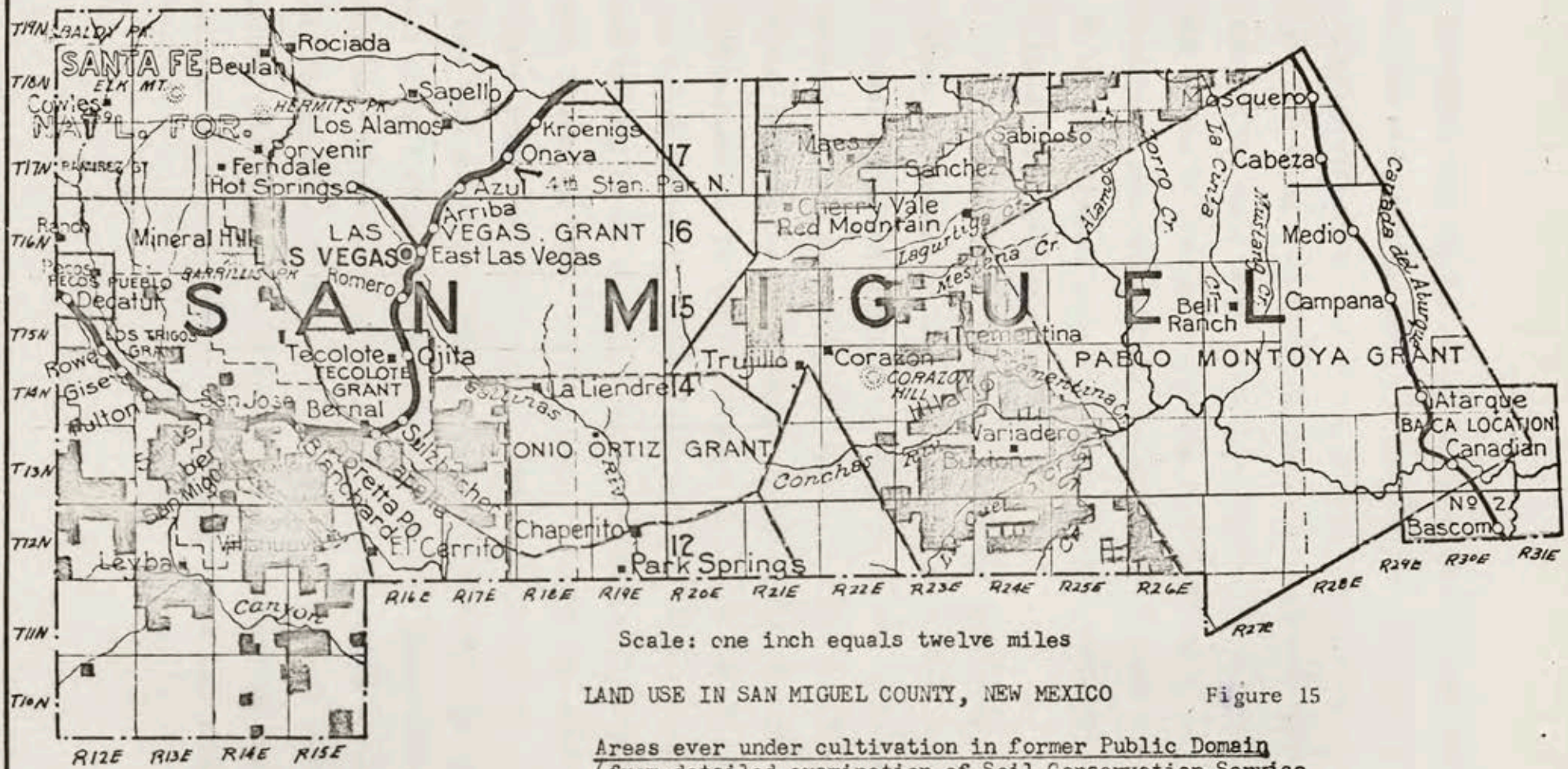
The main areas of the county in which homesteading on public domain was carried out and large amounts of land were cultivated were:

1. The Chavez-Trementina area, in the east central portion of public domain.
2. The Cherryvale-Trujillo area, just east of the Las Vegas and Mora Grants.
3. The Rencona area, in the far western part of the county and the public domain.
4. The Sabinoso area, along the Canadian River in the northeastern part of the county.
5. The Sanchez area, adjacent to the Sabinoso area and the Pablo Montoya Grant and considered by many a part of the former.

All these areas except for the Sabinoso area were cultivated mainly through dry farming, there being practically no irrigation water available either from the surface or from wells except along intermittent streams. In terms of the latter, lack of available

ground water for irrigation, the county is not like the areas to the east in both eastern New Mexico and northwestern Texas, where large amounts of ground water were found less than a hundred feet down. While both these areas and eastern San Miguel County, all part of the Southern Plains, were homesteaded heavily, with nearly all public domain made into patented homesteads, the areas outside San Miguel County were able to sustain continued farming of crops when conditions of climate changed. There was water available relatively easily and cheaply. The homesteads in San Miguel County could not continue in crop raising. In 1965 there is no commercial dry farming in the county, and very little crop raising for any purpose outside the irrigated valleys of the Pecos and Canadian drainage.

Figure 15, Areas Under Cultivation, Past and Present, shows graphically the shrinkage in crop production land use in former public domain. This map was compiled especially for this research. Detailed study of photographs of the entire county outside the National Forest, taken for a mapping survey for the Soil Conservation Service in 1953, gave a good indication of areas of the county that were under cultivation at that time or had been in past years. The original photographs were of a scale approximately 1:5,000, allowing very accurate location of such cultivated lands. Figure 15 does not show such detail because of the impossibility of transferring it to a map of such large scale. In 1965 there is only a scattering of isolated



Scale: one inch equals twelve miles

LAND USE IN SAN MIGUEL COUNTY, NEW MEXICO Figure 15

Heavy solid lines are railroads:
Santa Fe in west,
Colorado & Southern in east.

Areas ever under cultivation in former Public Domain
(from detailed examination of Soil Conservation Service aerial photographic survey - 1953)
by Thomas Maloney, 1965

Note: shaded areas are whole sections, either whole or part showing definite evidence of cultivation.
hollow sections are doubtful in cultivation

tracts where crop raising is carried on outside the river valleys, away from irrigation ditches. The map does not show areas of cultivation within the land grants, but the situation was essentially the same there, with rapid occupation of the land by humid area farmers in the early years of the 20th century, and the equally rapid decline of farming as it proved unprofitable as a commercial enterprise. This land boom was limited to the Las Vegas Grant, with the other smaller grants remaining generally untouched by the intrusion of commercial farmers.

Figure 15, if taken literally, is somewhat misleading, for it shows all Sections of Public Domain in which evidence of past or present cultivation was seen in 1953. There was obvious concentration of crop raising at one time in the areas mentioned earlier, Rencona, Chavez-Trementina, Cherryvale-Trujillo and Sabinoso-Sanchez. The map is deceptive in that it appears that even larger parcels of land were used for crop raising in the land adjacent to the San Miguel del Vado Grant, along the Pecos River between San Miguel and Villanueva. Actually only small isolated patches of land on the mesa tops surrounding the valley were cultivated. Evidence in support of this, aside from that of the 1953 aerial survey, is found in 19th century Township plats of the area, on file at the Las Vegas office of the Soil Conservation Service, showing a dozen or more Small Holding Claims, filed by people of Spanish surname, scattered all along the mesa tops from San Miguel to Villanueva. There were seldom

buildings, scarcely ever dwellings, at or near these tracts, further indicating that they were garden patches of a few acres which a man came up from the valley to cultivate, plant, and harvest, an auxiliary source of food for a subsistence agricultural existence. Thus the areas immediately adjacent to the Pecos valley are of little importance in past land use. It was felt that an explanation was necessary here to show why what superficially seems an active farming area is not included among the major homesteading areas of Public Domain.

The conventional stereotype of New Mexico has it that pastoral Hispanos were rudely and ruthlessly forced off the land by plough-wielding Anglo-American homesteaders, "poor white trash" from the western part of the South. Since the present study is limited to only one county, refutation cannot be made for other areas of the state. For San Miguel County, however, such an ethnic rivalry and displacement is very difficult to find in actual fact, although the folk lore of both Hispano and Anglo is heavy with prejudice of one group toward the other. The "Tejano" is cursed as the cause of all Hispano problems, and the "Mexican" is seen as the roadblock to "progress."

When examination of the records of homesteads at the Land Office was begun, it was expected that the names of homesteaders would be "Anglo" by an overwhelming majority. Also expected was a small number of actual homestead entries and patents on public domain because of arid conditions. Neither of these expectations was met. In only two areas, Cherryvale and Rencona,

were Anglo homesteaders in the majority. As far as number of homesteaders goes, nearly all the homesteads patented were for quarter-sections, 160 acres, even after the Enlargement Act of 1909, which allowed 320 acres, and after the Grazing Homestead Act of 1916, which allowed homesteads of full sections, or 640 acres. With approximately 44 townships in the county in public domain, each with 36 sections, better than 6,300 quarter-section homesteads could have been patented. Having noted that there were usually about twice as many people entering homestead claims as were able to "prove up" and get patents, full title, probably something in the order of 13,000 names were involved in San Miguel County. Examination of a large sample of the records of homesteading leads to the conclusion that nearly all available land was homesteaded. There is only a small amount of public domain in the county today. The original ambitious plan for this research of complete recording and analysis of all homesteaded lands in the county was subverted by the very immensity of the task.

Instead, those areas of the county showing evidence of cultivation in the 1953 Soil Conservation Service aerial survey were concentrated upon. Even here the number of sections and homesteaders is at the upper limit of the scope of this immediate research. There are 669 sections that show evidence of cultivation within them. Since there have never been over 57,000 acres of land under cultivation, it is obvious that the 669 sections, containing more than 420,000 acres, were not all ploughed up. From this it is seen that many homesteaders did very little crop

raising. Informants have verified this conclusion. In 1934 there were 2,350 farms in operation, the largest number in the history of the county. Since this includes land in the land grants, the non-use of land for crop raising on former public domain is emphasized further. It was the previous knowledge of the relatively small total acreage of cultivated land that led to an expectation that few farming homesteads were established. There is no reason to doubt the accuracy of censuses of agriculture, and certainly the government homestead records are also accurate. A naive explanation of the disparity between the amount of land homesteaded and the amount of land cultivated, bearing in mind modern dominance of cattle ranching on the former public domain, would be that Anglo ranchers or land speculators induced many Hispanos to go through the form of filing for homesteads. Then, when patents were issued, they were sold or assigned to Anglo cattlemen. This conspiratorial view of history may satisfy those Anglos with a romantic view of Hispano culture, seeing all good in it and all evil in the allegedly rapacious intruding Anglo culture. But this does not fit with the truth, or at least a small part of the truth gleaned in the course of this research. This truth is that many of the most prosperous cattle ranchers now using land homesteaded by Hispanos fifty or more years ago are themselves Hispanos, strongly loyal to the old culture. One Hispano rancher, Miguel Lujan, freely admits his father paid Hispano settlers to file claims and obtain patents on homesteads,

turning the land over at once to the Lujan ranch.

From Table No. V it can be seen clearly that most homesteaded land was taken up by people of Hispano ethnic identity. Although the summary of dates of entry does not give as clear a view of the sequence of occupancy as would a Section by Section tabulation of successful and unsuccessful homesteaders, with few exceptions it can be said that homesteaders of both ethnic groups entered the public domain at about the same time, within a range of 10 to 20 years. What is noteworthy, and needs further investigation is the generally higher proportion of apparent successful homesteading by Hispano as opposed to Anglo homesteaders. Only in the Rencona area is the situation reversed. Little information has been collected on this difference in successful adaptation to Plains homesteading. One explanation, an hypothesis, is that the Hispano homesteaders were mainly people from nearby settlements or other areas of northern New Mexico and southern Colorado while the Anglo homesteaders were from areas east of New Mexico and had few roots in the area, able and ready to move on if the obstacles to commercial success in dry farming seemed too great. In addition, Hispano homesteaders may have been able to rely on help from relatives and friends in bad years, while the Anglo homesteaders were usually isolated, on their own. The greater mobility of Anglo homesteaders is shown in other studies of New Mexico, as by Vogt in his study of the Texan homesteaders in the

Table V - Selected Areas of Homesteading and Crop Cultivation

AREA	Township	Anglo No. Patented Homesteads/%ofE	Anglo Dates Entry	Hispano No. Patented Homesteads/%ofE	Hispano Dates Entry	Dominant Group A or H	Dominant Group %
Chavez	T12N,R23E	24/54%	1887-1915	39/76%	1885-1935	H	58%
	T13N,R23E	32/51%	1887-1919	68/68%	1870-1921	H	62%
	T12N,R24E	9/23%	1882-1934	60/67%	1876-1934	H	87%
	T13N,R24E	10/53%	1907-1927	34/62%	1883-1924	H	77%
	T12N,R25E	8/30%	1907-1932	80/66%	1881-1930	H	91%
	T13N,R25E	3/100%	1887-1955	58/73%	1875-1926	H	95%
Cherryvale	T16N,R21E	24/46%	1905-1919	10/67%	1890-1917	A	71%
	T17N,R21E	59/56%	1882-1919	14/82%	1899-1915	A	81%
Rencona	T12N,R12E	24/67%	1900-1933	12/45%	1900-1922	A	67%
	T13N,R12E	20/54%	1916-1930	6/46%	1898-1947	A	77%
	T14N,R12E	0/ 0%	1919-1924	3/43%	1882-1934	H	100%
Sabinoso	T17N,R24E	6/37%	1881-1933	47/55%	1881-1934	H	89%
	T17N,R25E	12/52%	1889-1916	48/61%	1881-1918	H	80%
Sanchez	T16N,R24E	21/43%	1908-1919	26/84%	1885-1909	H	55%
Trementina	T14N,R24E	0/0%	1882	48/49%	1875-1919	H	100%
	T14N,R25E (30-33)	0/0%		13/81%	1900-1918	H	100%
Trujillo	T14N,R21E	3/60%	1885-1951	62/72%	1887-1930	H	96%
	T15N,R21E	3/75%	1915-1918	98/83%	1887-1930	H	96%
	T16N,R21E(35)	0/00%		3/60%	1903-1933	H	100%

Fence Lake area.[18]

There certainly is little evidence of displacement of Hispano settlers by intruding Anglo homesteaders. Contrary to F. C. de Baca and others, at least some Hispanos were aware of the Homestead Law and took advantage of it, some very early. In the Chavez area, nearest to C. de Baca's "Cuervo Country," which is mainly south of the county, there were Hispano homesteads patented as early as 1870, the earliest homesteads in the county. Only in the Cherryvale and Rencona areas did the Anglo settlers become dominant. Even then the Hispanos were obtaining patents in the areas some years before Anglo entry. An exception is one Anglo homestead on Section 8, T17N, R21E of the Cherryvale area in 1882. Almost certainly word had gotten around that there was free land in these areas for Hispano settlement, and there were ten or more years for Hispano exploitation of this opportunity before Anglo homesteaders entered much of this area. The Trujillo area is adjacent to the Cherryvale area. This, although predominantly Hispano, was not settled heavily until the early years of this century. For some reason, not found in this research, Hispano settlers leapfrogged over this whole area, the eastern edge of the Plateau zone, and settled in the 1870's such places on the Plains as Sabinoso. The absence of sources of irrigation water may be part of the reason. Also the area is predominantly "woodland,"

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[18]Evon Z. Vogt, Modern Homesteaders: The Life of a 20th Century Frontier Community (Cambridge: Harvard University Press, 1955).

unlike land to the east or west.[19]

There seems to be no doubt, even though a complete investigation of all homestead entries and patents in the county is beyond the possible scope of the present research, that the majority of claimants and patentees for homesteads on public domain were of the Hispano ethnic group. These people were not, so far as can be learned, displaced or dispossessed by legal or semi-legal maneuvers by Anglo homesteaders or ranchers. Again, while no data is available on the relation of crop production to ethnicity, it appears that environmental conditions affected equally Hispano and Anglo farmers, causing virtually all farmers to abandon farming and their land by World War II or earlier. These environmental conditions causing failure in crop raising are generally seen as decreased annual precipitation, causing and followed by the "Dust Bowl" of the 1930's. A few other factors have been suggested, including the standard "line" of the Soil Conservation Service and many ranchers, that plowing the virgin grass land led to serious erosion by water and wind, causing the land to be less productive and even to disappear downstream and downwind. Another, more novel and equally plausible factor, proposed by Callon[20] is that the natural manure of freshly plowed-under grama grass sod loses its fertilizing effect after a few years, and the land becomes less product-

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[19]Wells, op. cit.

[20]Callon, op. cit., p. 52.

ive. A combination of factors seems a likely explanation, with the erratic and variable nature of precipitation the primary factor.

Not only were the five areas listed previously the main centers of farming in former public domain in past years as seen from aerial surveys, but these areas today are the locale of much of the commercial cattle ranching. Land Office records give original patent holders, and 1964 tax rolls have been examined for present day holdings of cattlemen, both in homestead country and the old land grants. There is a gap in the data, however, in the thirty to eighty year period between patenting a homestead and present ownership and use. A thorough search of deeds would be needed to get the exact chain of ownership. This, given the size of the area under study, 4,700 square miles, is a whole research project in itself. Rather, present research has been limited to formal and informal interviews and conversations with modern ranchers and selected other informants in the county. It is felt that for this research a general picture will give a sufficiently accurate view of the shift in land use from open range sheep herding to enclosed crop farming to cattle raising in fenced pastures. Before proceeding to a study of crop production in the county, something should be said about land use in the area now or formerly in Spanish and Mexican land grants.

Land Use on Land Grants

The various land grants from the Spanish crown and the

succeeding Mexican government in present-day San Miguel County were all made, except for the Pecos Pueblo Grant, only shortly before American annexation of the Spanish southwest. Kearny, in his declaration in Las Vegas in 1846 annexing the whole area to the United States, assured holders of land grants that their claims would be recognized by the American government. By and large they were. But it took years of surveying and court action to acquire valid and clear titles to these grants. Much of the land was lost by the grant holders through lawyer's fees and long-term leases to Anglo, chiefly Texan, cattle ranchers. The Las Vegas Grant, largest outside the Pablo Montoya Grant, was not given a clear title until 1903[21] and was sold by a court-appointed board soon after this to land speculators. More will be said of this incident later.

Over half of the area of modern San Miguel County was at one time in land grants. These are shown on Figure 16. There remains today much resentment between Anglos and Hispanos in the county, in northern New Mexico in general, over the disposition of the land grants. Not only do Hispanos resent the loss of land they now wish they had and think was taken from them by malicious means, but many Anglos, especially some ranchers, feel Kearny created problems that will plague the state for years to come by his promise to recognize the old land grants. In San Miguel County the resentment of the Hispanos is today limited to grumbling and some ethnic prejudice, often classifying all non-Hispanos

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[21]Callon, op. cit., p. 198.

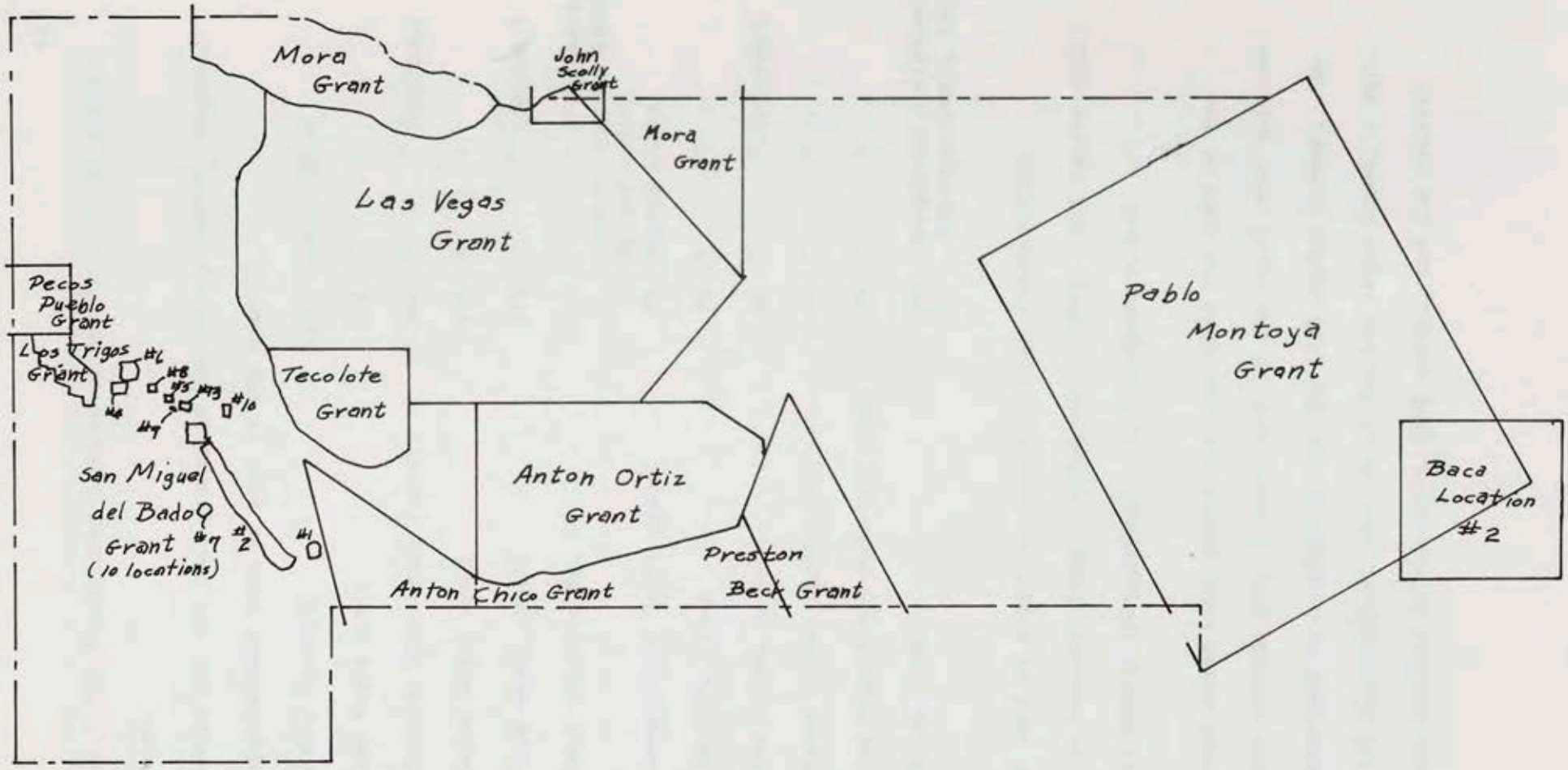

Figure 16, Spanish and Mexican Land Grants, San Miguel County, New Mexico

10 5 0 10 20 30

scale in miles

as "Tejanos," the traditional enemies of the "native" population of New Mexico.

Following are the land grants of San Miguel County, together with the approximate area of each in the county:

1.	Pablo Montoya	1,002 square miles
2.	Las Vegas Grant	675 " "
3.	Preston Beck Grant (part)	200 " " (approx.)
4.	Anton Ortiz Grant	177 " "
5.	Mora Grant (part)	171 " " (approx.)
6.	Baca Location No. 2	156 " " (50% overlaps with P. Montoya Grant - 99,289 acres)
7.	Anton Chico Grant (part)	78 Square miles
8.	Tecolote Grant	75 " "
9.	Los Trigos Grant	50 " " (approx.)
10.	Pecos Pueblo Grant (part)	50 " "
11.	San Miguel del Bado-less than	20 " "
12.	Nolan Grant	Not recognized (rejected by U. S. Supreme Court, 1897.)

Total land of county in grants - 2,586 square miles

Land in National Forest (established 1907) - 503 square miles

Public Domain (originally) - 1,660 square miles.

Although these land grants are over half the area of the county, they contain only a small part of the lands once cultivated as determined by examination of the 1953 aerial survey. Except for the east-central portion of the Las Vegas Grant, a dry farming area settled in the years 1908 onward, and the Storrie

Project, an irrigated region just west of this, there was very little commercial farming in the grants. Both these areas met with early failure as commercial ventures, however. Other farming was mainly traditional Hispano subsistence irrigation farming along river and creek beds of the land grants.

From all available evidence, including the testimony of informants then living in the area, the experience of settlers on the Las Vegas Grant was the same as that of the homesteaders further east on the land outside the grants, the Public Domain. Fabiola C. de Baca has given a vivid first-hand account of homestead life on the Plains during the first decade of this century.[22] It is nearly exactly the same as that E. Z. Vogt described in Modern Homesteaders for a later generation of homesteaders in western New Mexico where dry farming also yielded to cattle ranching, the Fence Lake area south of Zuni Pueblo.[23] What is particularly interesting in C. de Baca is the relations between existing Hispano cattlemen, such as her father, and the two classes of Anglo homesteaders who moved in and surrounded the Hispano ranchers, taking up and fencing in their traditional grazing lands. "Papa" saw and treated the prosperous Iowa immigrants as social equals, but he had only scorn for the "Tejano" poor whites who followed the more prosperous, but equally unsuccessful Midwesterners. That these poorer homesteaders brought with them

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[22]C. de Baca, op. cit.

[23]Vogt, op. cit.

strong prejudice against "Mexicans," whom they did not consider to be "white men," helped little in bettering hostile relations which had a strong ecological, competitive basis. "Papa" clearly saw this ecological factor, as his daughter also did and stated:

> Then we had control of the land, and only that saved us from destruction. I knew that, along with the "Nesters," we were due for a transition. They could not exist from farming, and we could not increase our herds in the land that was left for grazing. Papa had been resourceful and had acquired all the patented land available, school sections and what he could file for a homestead, but this was not enough. We had to think of droughts and when they occurred we had no lands toward which the cattle could be moved. On the Llano, unless it is very unusual, droughts are not general; there are always spots where it rains when others are dry. In one's pasture there are rainy and dry spots, and the pioneer sheep and cattle men knew them.[24]

The Public Domain, open grazing land, had provided the basis for hedging against variations in rainfall, and also the base for expansion of herds and flocks. With the coming of homesteaders, "Nesters," this margin for survival and expansion was taken away. What is unexplained by competition for the land is why the more affluent homesteaders were not treated as harshly by the "native" ranchers as were the later poor "Tejanos."

The parallel between the land rush on the Las Vegas grant and that far to the east near the Cabeza de Baca ranch is brought up here because it too was a result of land promotion. In the latter case it was primarily a railroad, the Rock Island, newly come to the New Mexico Plains, that did the promoting, but it attracted the same type of well-to-do experienced Midwestern

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[24] C. de Baca, op. cit., pp. 146-147.

farmers. Presumably these early homesteaders were received, at least by the wealthier Hispano cattlemen, very much the same way the Vegas Grande settlers of the same background were treated around Las Vegas.

C. de Baca briefly describes the reaction of her father to this first intrusion.

> In 1901, after the coming of the railroad, the Rock Island line promoted colonization into the land it traversed over the Cap Rock. Chartered immigrant cars brought a big colony of Iowa farmers. In the cars came draft horses, farming implements, dairy cows and household furnishings. These people were good farmers, but the Llano country was not farming land. The horses did not become accustomed to the country and neither did the dairy cattle. The Iowans built good substantial homes but their endurance soon gave out and in order to prove up on the land, they commuted for $1.25 per acre. In three or four years, all but a handful moved to other states or went back to their homeland. Papa liked these Iowans and counted them among his best friends. He bought a great many acres from them upon their departure.[25]

One of the main differences between the Plains and the Vegas Grandes, was that the former was occupied by many Hispano ranchers, while the latter area was not. The opportunity to buy at low cost abandoned patented homestead land became, as was mentioned before and will be again, the method of obtaining large tracts of land for many Hispano ranchers. In some cases, as with the C. de Baca's, it was a way to get back, with a clear title, the land a man had been using for grazing land before the homesteaders came. With others it became a way, really the only way, of building from scratch a large ranch estate. Evidence found in this

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[25]C. de Baca, op. cit., p. 147.

research shows that sometimes as much as 30,000 acres was obtained in this manner. On the Vegas Grandes, it was not Hispano ranchers who were able to build up large ranches, but later settlers, Anglos, who had not lived or even farmed in the area.

In summary, the land rush to the virgin grassland near Las Vegas, in the grant, an attempt by humid area farmers, quickly failed in establishing crop raising in the area. The rush ended by the 1920's, and the land became grazing land for large cattle ranches. It was a brief interlude, of little consequence to the economy of the county, leaving a pessimism and a fear of new ventures that still haunts the area and the city of Las Vegas.

Life on Homesteads in the Middle Period (1900-1918)

Remembering that for this research homesteading activity has been divided into three periods, before 1900, from 1900 to World War I (1918), and from 1918 through the early 1930's, and that the greatest settlement took place in the middle period, the first two decades of this century, a picture of the way of life of these people helps to show the attempts made with very limited resources to establish dry farming in the semi-arid environment of central and eastern San Miguel County. There is little available information on Hispano homesteading, but Fabiola C. de Baca has given a concise description of Anglo settlers on the public domain in the region which includes the Chavez area of the county. Already mentioned in the previous section is the brief intrusion of Midwestern farmers with relatively large

amounts of capital. She has given far more coverage to the poorer people who tried a few years later to become dry farmers in this area. As a young girl she was allowed free access to the homes, churches, and social affairs of these people, even though a wall of prejudice existed between these lower class Southerners and her father and his peers. Part of the prejudice was ethnic, and part was class in basis. Her family, as mentioned before, was willing to associate with the more prosperous Iowa farmers, but the name Cabeza de Baca was an aristocratic one, and her father never could accept "poor white trash" as equals. That he allowed his son and daughter to associate so closely with these despised people is interesting in itself.

> When the Enlarged Homestead Act was passed (1909), families from Texas, Oklahoma, Arkansas and other Southern states began to look towards New Mexico as the land of promise. These families had been sharecroppers or tenant farmers in their own states and to own land was their most cherished dream. By saving and skimping they accumulated two or three hundred dollars in cash. With a wagon, a team of horses, chickens, possibly a milk cow and their household goods, they joined other caravans and the march started toward the Utopia of their dreams.[26]

Although this movement was thirty years before the migration Vogt describes, the motivation, aside from the depression and Dust Bowl of the thirties, which Vogt discounts anyhow as primary motives for the Fence Lake Homesteaders, was basically the same, a piece of land and a life to call one's own.

> While the immediate impetus for the movement was provided by the depression and the severe agricultural

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[26] C. de Baca, op. cit., p. 147.

> conditions on the Plains, the long-range promise of an opportunity to establish permanent family-owned farms on which they could be "independent" and control their own destinies, rather than being tenants or working for somebody else, was a critical factor in the decision to migrate. Furthermore, while some of the "big ranchers" in the Homestead (Fence Lake) area actively discouraged and opposed the homesteading effort, the general reception was quite different from that accorded the migrants to California. They were defined as genuine twentieth-century pioneers. . . .[27]

While there is little direct evidence that "pioneer" status was accorded these San Miguel County immigrants from the South, it is probable that they were seen by the townspeople of the county, in Las Vegas and in the smaller trading settlements along the Rock Island railroad, as such "pioneers," as were the Midwestern farmers of the Vegas Grandes. As shall be emphasized later, the homesteading movement in southeastern San Miguel County and in the adjacent areas of Guadalupe County, then a part of San Miguel County, was a source of considerable income to the merchants of the towns along the railroad, and later the basis for large fortunes in ranching when the homesteads were taken over by some of the merchants after all the hopes and credit of the homesteaders were exhausted.

Concerning living conditions of these homesteaders, C. de Baca makes this comparison with her own family's life.

> Our rock house may not have been elegant, but it was a mansion compared to the lowly shacks which the newcomers built. These were merely roofs over their heads and sometimes they did not have even protection from the scant New Mexico rains. There were a few who built substantial houses, because they had brought a little more cash, but they, likewise, soon spent their savings.

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[27]Vogt, op. cit., p. 18.

> They were kindly, simple folks, these homesteaders. Their hospitality was boundless, and Miss Fabiola and Mr. Luis were idolized by young and old. My brother, Luis, and I loved them, but El Cuate and Papa kept aloof, never quite understanding what Luis and I saw in those uncouth people.
>
> A few of the colonists were of the better educated class. Their standards of living were above the average, and Papa did not fail to pick them out as he had the Iowans from the others whom he called "Milo Maizes." This name he gave to those he disliked, because, milo maize was a hardy crop they planted for feed. It was introduced by them into New Mexico.[28]

The milo maize she refers to is sesuto maize, sorghum, a crop as she says, not previously grown in New Mexico. Her father, an educated and relatively prosperous man claiming aristocratic Spanish lineage, appears to have discriminated among the migrants of equal education, economic status and standard of living, treating them as equals, but holding the majority of homesteaders, having lower education, economic means and standard of living in contempt. The crop which he labelled these people by is still not a common crop in the county, especially among Hispano farmers. It is almost as though sorghum personified the despised Anglo intruders, especially those who were of lower status and carried with them strong prejudice against "Mexicans." Only 1,100 bushels of all sorghums were harvested from a mere 1,000 acres in the county in 1962, according to the New Mexico Department of Agriculture. The prevalence of this crop seems to be a rough index of successful Anglo adaptation to the environment, for surrounding

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[28] C. de Baca, op. cit., pp. 147-148.

counties, particularly on the east, where many Anglo farmers have settled successfully have much higher production figures. For example, in Harding County, to the northeast, 19,200 bushels of sorghums were produced in 1962 on 1,500 acres; in Quay County, on the east and southeast, 778,000 bushels on 28,000 acres; while in surrounding counties still predominantly Hispano the figures are as low as in San Miguel County; Mora County producing 600 bushels on 100 acres; and Guadalupe County, 1,000 bushels from 200 acres.[29] Sorghums are a crop definitely identified with Anglo ethnicity, even today.

Concerning the less tangible aspects of Anglo homestead life on the Plains in this middle period, C. de Baca has this to say:

> In spite of the hardships, which to the homesteaders may not have been such, these people were happy and easy-going. The women worked right along with the men in the fields; they milked the cows and tended the poultry. Their housekeeping was poor, for they had miserable houses with which to contend, but they were excellent cooks, considering the scant variety of food which they had. They knew how to utilize their milk products in many ways and all other food they managed to make palatable. With all my home economics training, I could not compete with them, perhaps because El Cuate took care of our daily diet.
>
> If today I can fry chicken, make sour milk biscuits and corn-bread, I owe it to the friends of my youth on the Llano.[30]

What is not said by C. de Baca about the comparison between her life and that of the homesteaders can be read between the lines. Working in the fields and tending chickens was not a

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[29]New Mexico Department of Agriculture, New Mexico Agricultural Statistics, Vol. III (Las Cruces, New Mexico, 1964).

[30]C. de Baca, op. cit., pp. 150-151.

woman's work among the Cabeza de Baca's. Nor was cooking on the ranch a woman's job. Good housekeeping was assumed on a fine Hispano ranch, as was, of course, a "substantial" house. These homesteaders brought their southern food preferences with them, and, as she does not say quite outright, the meager diet was what they probably were used to back in their old homes, where they had also been poor.

A further close parallel to Vogt's account of homesteaders is seen in the religious and moral life of these earlier settlers. He spent more space in describing the churches and social life of the people, but except for C. d Baca's reluctance to write of or perhaps innocence of the less acceptable aspects of this life, the accounts are very similar.

> These people did not build chapels, as my people had done, yet some were very religious. As in any settlement, there were various types of families. There were the churchgoers and those not affiliated with any church; there were those who danced and those who positively considered dancing sinful.
>
> But whether they danced or not, life for all seemed blissful. I never heard them complain about the heat or the drought or hard work. The churchgoers met in the schoolhouse for prayer meetings and Sunday school. This was not only a religious ceremony, but also a social gathering. The women brought food, and after services the families spread out their victuals and all ate together. The congregation then separated into neighborly groups, exchanging gossip and then went home to get ready for another week of toil.
>
> In the summer, there were "Singings" among the religious groups. Neighbors would gather in some house any day of the week. The young folks played games and sang songs early in the evening; later, young and old joined together and sang hymns. About midnight, refreshments were served and then the guests departed.

> The dancing groups met together at the school house or some house for a night of swing. The dance started as soon as it became dark. The ranches were six to fifteen miles distant and the dancers came by wagon, carriage or horseback. We had to leave home before dark, for although the horses had good sense, it was not safe to venture in the dark. We danced until daylight, for we needed to see the road to avoid accidents, or perhaps, we liked to dance so well that a few hours did not suffice. At midnight, the men made coffee by a campfire; the women brought cakes and we certainly had a feast.
>
> On Sundays, the non-church families took turns in going to some home to spend the day. The women always helped with the preparation of the noon meal;the men played cards and sometimes the visits lasted until midnight.
>
> My brother and I divided our time with all groups and although there was animosity among them, Mr. Luis and Miss Fabiola were heartily welcomed whether to a prayer meeting, singing, or dance.
>
> In the summer, we had enjoyable picnics, celebrating the Fourth of July or just for a Sunday outing. Sometimes there were as many as twenty families together.[31]

From this account, it would appear that the homesteaders had a social life of some complexity, with churches, visiting groups, and dancing groups. What they lacked, except in a few cases, was extensive kinship groups. This was in sharp contrast with the Hispano settlers, both the older ranching families and the newer homesteaders of the early and middle periods. The Hispanos often had relatives scattered all over northeastern New Mexico after 80 to 100 years of settlement. This broadly diffused web of kinship functioned not only for mutual aid in time of need, but preserved a continuity of culture, especially in religion, language, and social and political ties that the

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[31] Ibid., pp. 151-152.

Anglo settlers had no counterpart to. In the drought of 1918, when the now-enclosed C. de Baca range was unable to support "Papa's" herd, he was able to ship his cattle to the land of a close relative where there was adequate grass, and thus avert the destruction or forced sale of his cattle. It took the far more widespread drought of the 1930's to wipe out Sr. Cabeza de Baca's herd and all his cash reserve, for there was no place to turn to then. All the Southern Plains was an agricultural cipher at that time.

The end of the homesteading movement came very quickly, as the resources of these people, so limited to begin with, were used up. Not only the homesteaders disappeared from the land, however, Those Hispano ranchers,who had not been forced out of business by homesteads taking over their old range,had by and large not taken precautions to enlarge their holdings,also went under. C. de Baca makes it clear who profited from this general failure, and she shows how the land came to change hands in the time before the first World War.

> Hardly a day went by but some new family arrived, until nearly every inch of ground was taken.
>
> There came droughts and the settlers found it harder and harder to exist. The little money which they brought with them was soon exhausted, and the merchants in the small railroad towns started to give credit to the farmers, with the hope of getting the land in return, and it did not take long for them to acquire it at a low price.
>
> The few cattle and sheep men who were left and who had not been foresighted, had to diminish their herds and they also had to live on credit from the country store. One by one, they also disappeared and Papa would say:

> "Someday the land will be washed away, for there is no grass nor shrubbery to protect it. I may not live to see it, but you young folks will realize why I have been so perturbed over this colonization by the Nesters." But he did live to see it, for when the "Dust Bowl" became a menace, he was here to see his predictions become a reality.
>
> The homesteaders were a persistent folk; they plowed and planted and lost their seed, but they stayed on three or four years, or at least until they made final proofs on their claims. A handful remained, but others, although late, realized that their Utopia was a cruel land ready to suck the last trace of hope from them.
>
> One by one they departed, and Papa bought or leased acres and acres of land from the disillusioned colonists and his pastures increased to good proportions, but it was bad land. So much of it had been plowed it would be years before grass would grow. The merchants in the railroad towns became the cattle kings, although some of them started in the mercantile business with less money than one Nester had brought to see him through. By sagacity they had built up fortunes and the land was theirs.[32]

Thus the land of this part of the county went from open range, used mainly by Hispano sheep and cattle men, to short-term Anglo homesteading, mainly by immigrants from the South, to privately owned cattle grazing land, with large parcels held by single owners.

Poor small merchants of towns like Tucumcari, Montoya, Newkirk, and Cuervo took over the land in northern Guadalupe County and southeastern San Miguel County and became the "cattle kings." Evidence from other parts of eastern San Miguel County shows the same situation, with slight differences. Both Anglo and Hispano homesteaders came out in large number in this middle period, the Hispano by far the larger group. Merchants,

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[32] Ibid., pp. 152-154.

mostly Hispano in San Miguel County, took over the land as homesteaders abandoned their holdings. It is interesting that at least two Hispano ranchers today have carefully kept up their old stores through which each of their fathers acquired title to several tens of thousands of acres of homestead land. They owe much to these little stores, and they know it.

The importance of the successive waves of homesteading on public domain in San Miguel County, all ending in failure, is obviously not that a permanent crop raising industry was established, an activity that would seriously compete with livestock grazing for land use. Rather, it is simply the fact that much land was temporarily taken out of use for cattle and sheep, plowed up for cropland, and fenced in. This temporary loss of grazing land, which also was, of course, a permanent loss of public domain, was sufficient to finish off many ranchers, who had no savings or capital other than their herds and flocks, and no place to graze these. Without money to carry them over from the loss of open range grazing lands, many of the smaller operators had to quit the livestock business. The homesteaders stayed on the land just long enough to finish off large numbers of ranchers who could not afford to wait for failure and abandonment of homesteaders, and who, furthermore, had no idea when or if such abandonment of homesteaders would take place. Once the land was taken up by homesteaders, the rancher who used it for grazing his animals was finished, unless, like the larger ones he had enough assets, including cash reserves and titled land, to carry himself until the homesteaders quit and he could buy

up their lands. Even then the land had to be returned to its original grass cover before it had any value for the rancher.

In the long run the homesteading movement did two things. It removed the small-scale cattlemen and the sheepmen of all sizes of operation from the scene, and brought nearly all the public domain into private ownership, making fencing of pastures not only possible and necessary, but legal.

Although references make it clear that it was homesteading that finished the sheep industry in northeastern New Mexico, it is not clear why sheep raising was so much more vulnerable to this taking up of land than was cattle raising. Apparently there were economic factors not directly related to loss of grazing lands that made the difference. Perhaps the cattlemen were people of greater wealth. Perhaps the market for wool, hides, and mutton dropped off substantially. In any case, Figure 17 shows that, even allowing for a decrease in the size of San Miguel County by 1900, that the number of sheep on the range dropped dramatically from more than 320,000 head in 1900 to just over 100,000 in 1910, and further to 40,000 head in 1920. During this same period the number of cows rose from 22,000 in 1900 to 33,000 in 1910, and then dropped somewhat to 25,000 in 1920. This last decline is attributable to a severe drought in 1918 that forced herd reductions. Both the number of cattle and number of sheep have fluctuated up and down since the 1920's, but whether one compares an absolute equivalence of one cow and one sheep or a more realistic one cow equals five sheep, the sheep herding as-

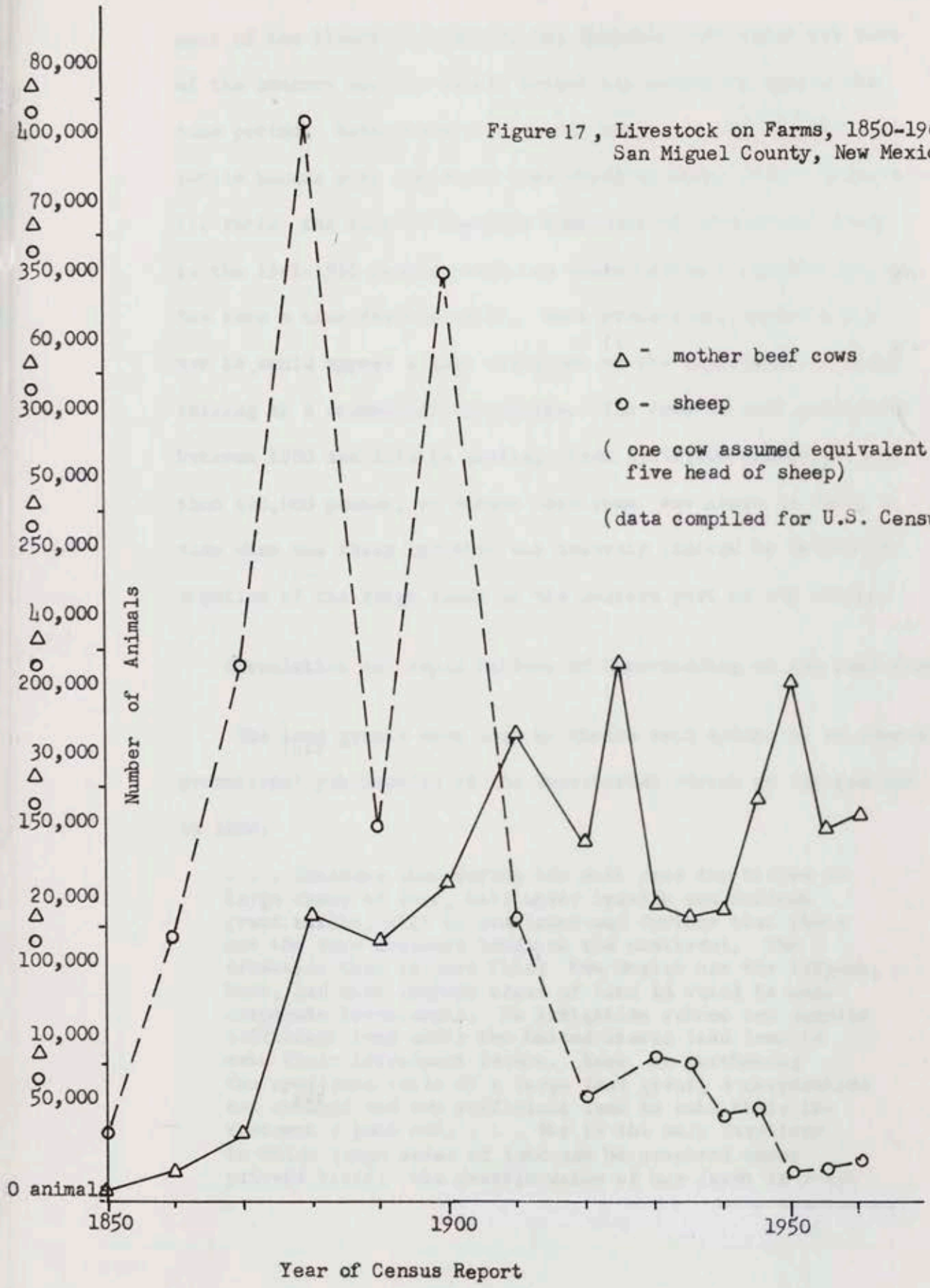


Figure 17, Livestock on Farms, 1850-1960, San Miguel County, New Mexico

pect of the livestock industry has declined ever since the turn of the century and the cattle aspect has increased during the same period. Using this five to one ratio, it can be said that cattle became more important than sheep in about 1910. Using a 1:1 ratic the time of absolute dominance of cattle over sheep is the 1945-1950 period, much too conservative a calculation and too late a time for the shift. Wool production, shown in Figure 18,would appear a good criterion of the importance of sheep raising as a commercial enterprise. The drop in wool production between 1900 and 1910 is amazing, from 1,250,000 pounds to less than 100,000 pounds, an amount less than was shorn in 1860, a time when the sheep industry was severely limited by Indian occupation of the range lands of the eastern part of the county.

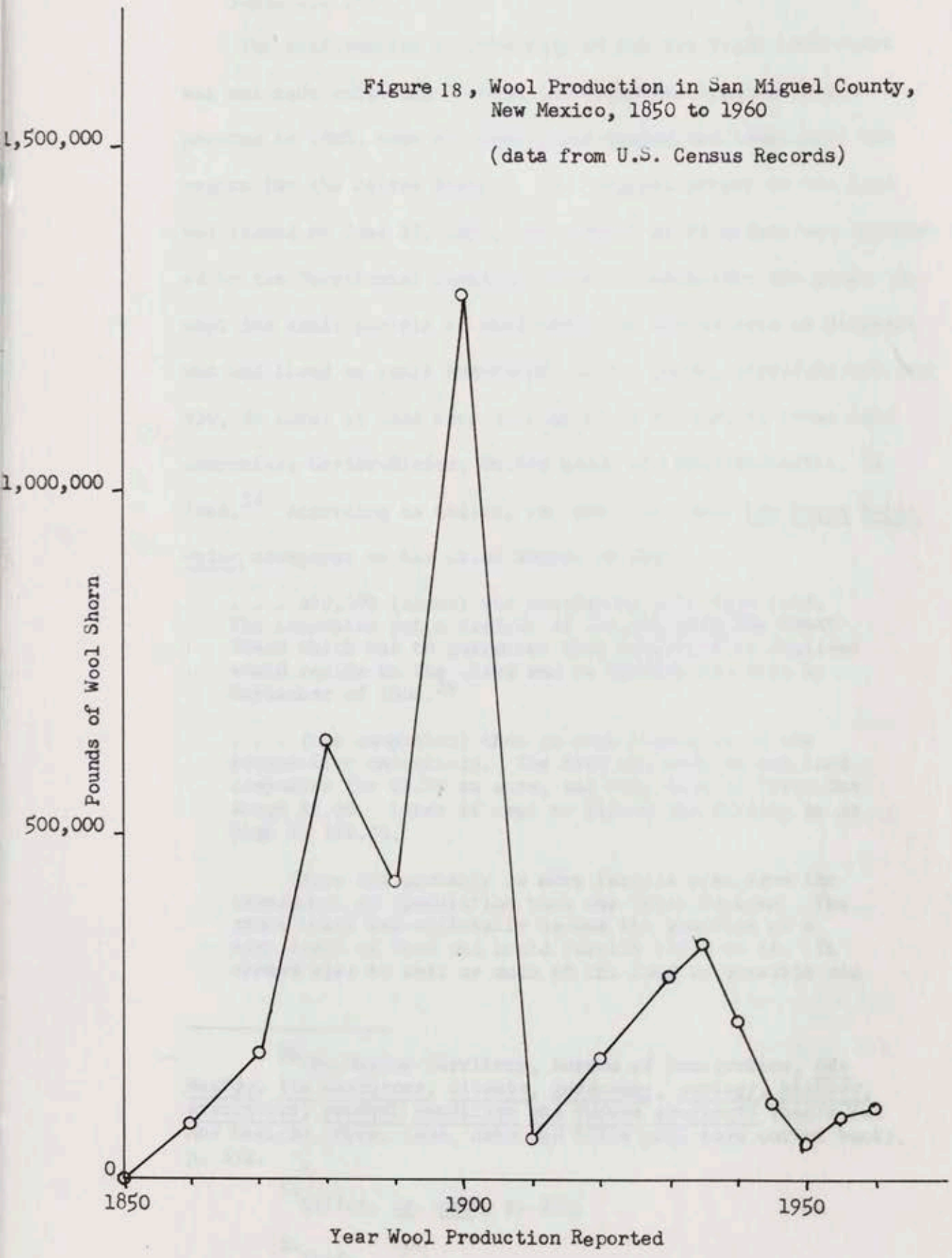
Speculation and Rapid Failure of Homesteading on the Land Grants

The land grants were seen as choice real estate by an avowedly promotional publication of the Territorial Bureau of Immigration in 1894:

> . . . Consider that during the next year the titles to large areas of land, held under Spanish and Mexican grant titles, will be confirmed,and further that these are the very choicest lands on the continent. The situation then is just this: New Mexico has the largest, best, and most compact areas of land in which to make corporate investments. No irrigation scheme can acquire sufficient land under the United States land laws to make their investment secure. Here, by purchasing the confirmed title of a large land grant, a corporation can command and own sufficient land to make their investment a good one. . . . She is the only Territory in which large areas of land can be procured under private title; the average value of her farms is very

Figure 18, Wool Production in San Miguel County, New Mexico, 1850 to 1960

(data from U.S. Census Records)



> high, and the spirit of her people very liberal and just. . . .[33]

The confirmation of ownership of the Las Vegas Land Grant was not made until the Town of Las Vegas was legally incorporated in 1903, some 57 years after Kearny had taken over the region for the United States. The original patent to the land was issued on June 27, 1903, and a Board of Directors was appointed by the Territorial District Court to administer the grant. Except for small parcels of land that were deeded over to Hispanos who had lived on small homesteads on the grant, virtually all the 430,000 acres of land were sold at $1.50 an acre to three land companies; Gaylor-Kiefer, United Land, and Edwards-Martin, in 1908.[34] According to Callon, who used the local Las Vegas Daily Optic newspaper as his chief source of data:

> . . . 350,000 (acres) was considered good farm land. The companies put a forfeit of $10,000 with the Grant Board which was to guarantee that seventy-five families would reside on the land and be tilling the soil by September of 1908.[35]
>
> . . . (the companies) then in turn resold it to the prospective colonizers. The land was sold to the land companies for $1.50 an acre, and they sold it first for about $5.00. Later it went to $15.00 and finally to as high as $30.00.
>
> There was probably no more fertile area from the standpoint of speculation than the Vegas Grandes. The grant board had officially become the guardian of a vast tract of land and could furnish title to it. It seemed wise to sell as much of the land as possible and

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[33] New Mexico Territory, Bureau of Immigration, New Mexico, Its Resources, climate, geography, geology, history, statistics, present condition and future prospects (Santa Fe: New Mexican, Prob. 1894, date and title page torn out of book), p. 318.

[34] Callon, op. cit., p. 201.

[35] Ibid.

> bring in the hard cash that was needed for schools, roads, and other improvements. . . . In simple terms, the land companies bought across the board and then sold at prices that would net them at least a reasonable overall profit on their entire purchase. This is not to say that the land companies didn't make considerable money on the venture. Regardless, there seemed to be many satisfied people on all sides of the program until the glowing reports were up for proof.[36]

> . . . The most revealing and yet mysterious facet of this land rush that lasted in Las Vegas from 1908 until the early '20's is found in the daily reports of the Optic. The list of arrivals on each trainload of homeseekers is replete with names of prosperous farmers from the Midwest who were considered the last word in the science of land productivity. They convinced themselves of the worth of the land; sold their former land; uprooted their families and settled on the mesa as dry land farmers.[37]

An informant, Henry Beisman, the only local surveyor and civil engineer, has stated that all the land was divided into small homesteads, very few larger than 160 acres, and many smaller than this. Mr. Beisman has all the records of titles for the Las Vegas grant, and he feels that the experience of the settlers on the land grant is identical with that of the homesteaders to the east and south on Public Domain. The main difference between the areas seems to be that very few of the grant settlers were people of small means, Texans and Hispanos seeking free land, but were Midwest farmers with considerable capital to invest and a good knowledge of humid area farming technology.

Another informant for this study, T. B. Conway, also used by Callon in his history of the area, stated that a large num-

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[36] Ibid., p. 199.

[37] Ibid., p. 200.

ber of the grant settlers were Mennonites. He used this fact to illustrate that even these frugal people were unable to sustain themselves on the land.

> You know how they are: give them a sheep and they have clothes for the winter,

he said. According to all sources, most of these settlers tried to stay on, but after one or two years, even they had to abandon their settlements.

Callon cites the extravagant claims for the land and climate of the grant, showing how the local Chamber of Commerce, the Santa Fe railroad, the local newspaper, and the land companies combined to convince the supposedly cautious and wise humid area farmers of the richness and potential of the Grant for farming. He quotes a booklet written by George A. Flemming, secretary of the Chamber, and published in 1908 by the Territorial Bureau of Immigration:

> San Miguel County offers to the homeseeker, the investor, the healthseeker:
>
> A vast area of fertile farming lands and an abundant and dependable rainfall, guaranteeing the success of farming without irrigation.
>
> An unequalled supply of water for irrigation where needed or desired.
>
> Many thousands of acres of government lands open to homestead entry.
>
> A great undeveloped mineral bearing area offering alluring fields to the prospector and investor.
>
> Adequate railroad facilities.
>
> Abundant range for many thousands of cattle, horses,

sheep and goats.

Centrally located markets which will consume or dispose of every pound of the products of the land.

A climate without equal in the world for the alleviation of the throat and lungs, with adequate resorts, and magnificent mountain scenery.

A fine educational system providing for the thorough education of every child.

Homes for all who come.[38]

Callon refutes the exaggerations and outright lies of this pamphlet with some sarcasm and some plain figures a few pages later.

A look at the precipitation for the year 1908 gives an idea what the new dry land farmer was up against. After a combined rainfall of 1.19 inches in February and January, the precipitation for March was 0.05; April, 1.12; May, 0.68; June, 1.13; July, 2.71; August, 9.24; September, 0.06. If the salesmen for the land companies had said that the land received approximately 18 plus inches of precipitation per year, they hit it on the head that year. It was an average year but it certainly couldn't produce crops with over half of the rain in the month of August. J. W. Tallman, one of the land promoters, tried to explain the situation when he wrote the Optic a letter:

"New land is sour land and it needs to be turned where the chemical action of the sun, rain and frost 'sweetens' it."

On the twenty-first of July, W. H. Henick, a "potato expert" in the employ of the Gaylor-Kiefer Land Company issued the following statement:

"Nobody could ask for better crop growing weather than this. No country has any better producing weather. It was rather late coming, but there is plenty of time yet to plant and grow beans. They mature in six weeks in this section and this is a particularly favorable year for this crop."

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[38] Ibid., pp. 197-198.

> . . . Actually the rain that did fall on August 2nd was wasted mostly in runoff. Then on August 7th, the area experienced another deluge of 2.88 inches. This unpredictable pattern of rainfall is given special attention in the year 1908 in order to explain the reason for the failure of the land to produce dry land crops in the face of glowing and factual reports of fantastic production. The belief that the mesa can produce year-to-year crops still persists after fifty years of failure. The persistence of this rumor is found in the reported (sic) turned in by farmers and the success of the exhibit by San Miguel County at the Sixteenth National Irrigation Congress held in Albuquerque in 1908.[39]

The most obvious refutation of the promoters was the ultimate complete failure of dry farming on the Grant. The settlers were mostly commercial farmers, and if working the soil in the grant did not seem a paying proposition, then they were quick to liquidate their holdings and seek successful farming elsewhere. There is not today one commercial dry farm on the Grant, not even one in the whole county. Many of the lower economic status settlers on the public domain did not leave the land quickly, as has been noted earlier. The commercial orientation of the grant settlers and many of the homestead settlers of the Plains made it impossible and quite irrational to stay on land that did not "pay." Subsistence farming, on the other hand, might continue as long as a farmer was able to find food, shelter, and clothing for his family, or for himself alone.

The school of rural studies which sees all Hispano settlers as non-commercial in their farming life and all Anglos as the opposite, utterly commercial in their attitudes toward

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[39]Ibid., pp. 203-204.

farming and land does not take into account the "poor whites" who left Texas, Oklahoma, Arkansas and other parts of the South seeking cheap land and a chance to be their own bosses. Nor does this school see, no matter how directly pointed out, the entrepreneurs of Hispano identity, even of the Mexican period, as anything other than vestigal "patrones,"[40] or renegade, acculturated Hispanos become Anglo in culture.

In concluding a discussion of farming on the Vegas Grandes in the first decade of the 20th century, a further excerpt from Callon tells much more of the abortive attempts than present research can obtain from surviving informants. Actually, very few people who took part in the land rush stayed in the region. The optimism expressed in newspaper articles and editorials about the prospects for farming is not matched by any available account of the bitterness and frustrations that complete failure generated in the immigrant farmers. Conway and Beisman were not direct participants in this land rush, but outsiders, observers of it, valuable though they are in supplementing Callon's caustic version of the plowing under of the county's once-celebrated "sea of grass," Las Vegas Grandes.

> A front page article (Las Vegas Optic) on March 7 (1908), gave an excellent review of the prospects and how the new landholders felt about the land. The editor went out on the mesa with a group that had come in on four special cars and he reported:

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[40]Clark Knowlton, "Patron-Peon Patterns Among the Spanish Americans of New Mexico," Social Forces, Vol. 41, 12-17 (1962).

"All are delighted with what they have seen. More than $1,000,000 already has been expended in developing this land and many homes are now under construction, wells are being sunk and broad acres are turning their black loam to the sky under the resistless sweep of the big steam plows. Much of the soil is ready for seeding and careful inspection by the visitors, all of whom are experienced or veteran farmers, convinced them that nowhere have they seen better land.

"They were shown the big springs which furnish abundant water in all seasons of the year and were taken to the site where the large hotel is being erected.

"Another mighty traction plow is to arrive here within a few days. This machine will plow ten furrows with one sweep and discs and drags to follow it will leave the soil ready for seeding after but a single operation across its surface . . . . Nearly the whole of many thousand acres is open to cereal production and it is the plan within a year to have the larger portion of it working. . . .

"Supplies for all of this vast acreage will be purchased in Las Vegas and marketing for the entire district will be done here. . . "

The gentlemen from Indiana eventually established the settlement of Mishawaka in honor of their home town, and the ruins of an old school house on the mesa is all that is left, as of this date, to tell the story of their efforts to establish dry land farms on the Vegas Grandes.[41]

Even though the aerial photographs used in the 1953 Soil Conservation Service Survey were small scale, no evidence was seen of the settlement or house foundations in this area. Although the land never recovered its legendary dense covering of excellent grama grass, practically all evidence of human habitations were covered. This phase of Anglo intrusion into the county has left little other than a broad scar of

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[41]Callon, op. cit., p. 202.

secondary growth grasses, and, as Callon noted, a persistent belief that the land ought to be good crop land. Today virtually every acre of the Grant is cattle range land, owned by medium and large-scale ranchers, with none of these owned, as far as can readily be determined, by descendants of the dry-farming settlers of this period.

Ethnic Conflicts Over Land Use

Even during the post bellum period of moderate activity in cattle raising, there were many Hispano inhabitants of the county who expressed their resentment of the intruding Anglos in a vigorous way. Among these were the Comancheros, people who traded with the Comanches, and took part with them in raids on Texas cattle. The account of one such Comanchero is given by Fabiola C. de Baca:

> The Comanche Indians had been friendly with the ciboleros for more than a century. As we traveled into the Ceja and the Llano to hunt buffalo, we carried with us bread, panocha-sprouted wheat pudding, whiskey, guns, cotton fabrics, beads, knives, and other articles. These we traded with our friends, the Comanches.
>
> The Comanches resented the moving of the Texans and other stockmen with their cattle into their land. Stealing cattle was the means of revenge which the Indians used against the cattle owners. The Comanches would meet us at our camps along the buffalo country. There we exchanged our goods for cattle and horses that the Indians had driven from the unfenced land of the cattle kings. We gained very little from the trade, as the Americans to whom we sold the cattle paid us low prices for them. It was merely getting rid of them for whatever we could get. The leading New Mexican patrones, who sent their wagons for the buffalo hunt, did not approve of our dealings with the Comanches. . . . They looked upon us Comancheros as

common cattle thieves.

> The American Government kept on the trail of the Comanches, but often the officers who were sent out to stop the illicit trade found it profitable to engage in it themselves and thus delayed the end of it for several years.
>
> By 1876 the trade began to wane, and the Comanches, who were finally rounded up by the military government, were put on reservations. So ended a colorful business which remains only a happy memory of our meeting with our friends the Comanches at Palo Duro Canyon, Canyon de Tule, Tierra Blanca, Rio de Las Lenguas, and the Valle de Lagrimas.
>
> Gradually the buffalo disappeared, and on the Llano land the grass grew without disturbance. The Indians no longer roamed the county to endanger the lives of those who saw promise of good grazing on the Comanche domain. Cattle companies began to push forward and the New Mexican sheepman and small cattleman, who was usually a lone owner, could not hold out against the powerful syndicates. The war was on between the two contenders, neither of whom had a deed to the land.[42]

In conversations with present-day Hispano New Mexicans the Comancheros are usually defended, and more than a hint is made that this was one small way, the trade of cattle and guns, to get even with the intruding Texans and Americans.

As in the rest of the West, the period following the hard winters of 1886-1888 was a time of reorganization and adjustment of the livestock industry. The main difference between New Mexico and the rest of the western plains area, aside from some obvious differences in latitude and climate, has been that New Mexico was already occupied by pastoral colonists or pioneers of European descent, whereas the rest of the area in front of the Rockies was inhabited only by various nomadic

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[42] C. de Baca, op. cit., pp. 47-50.

Indian groups, who could be warred against and pushed off the land onto reservations. Outside New Mexico the conquest was to be military, with victory leading to removal of the obstacles to Manifest Destiny from all the usable land. But Manifest Destiny, the bringing of "Anglo-Saxon civilization" to an untamed wilderness, met an unexpected and persistent obstacle in "Hispano-Mexican civilization." The weapons used here were political, legal, and economic, although gunfire was not unheard of, nor were other forms of physical struggle absent. There is no question but that the Hispanos were on the land first, even in the easternmost portions of the county. That they were there only a decade or at most a generation or two earlier, and often had no legal title to the land, made them vulnerable to conquest and displacement. Even today an uneven truce exists between Anglo-American and Hispano-American in all northern New Mexico, for, vulnerable though they were, the Hispanos were never completely conquered, vanquished or assimilated. The physical environment, as Mosk has pointed out, was inhospitable to long-range use with the technology and institutions of Spanish colonial culture.

> From the end of the sixteenth to the latter part of the nineteenth century, the primitive, non-rationalized economy of the Spanish-Americans provided a workable adjustment between population and the slender land and water resources of New Mexico. This balance was rudely disturbed when railroad construction attracted large numbers of Anglo-Americans, whose commercialized outlook soon enabled them to dominate the older inhabitants. In contrast, the Spanish-Americans who clung to their social and economic institutions, found themselves in a position of great disadvantage. At the same time, and as part of the same process, the land resources of New Mexico were wasting away. To restore a balance between

> population and land is the main problem that faces New Mexico, and it must be attacked with a full knowledge of human as well as physical conditions. The human conditions, as I have tried to show, are derived from Spanish colonial institutions.[43]

Although Mosk wrote this in 1942, the problem situation still exists in most of northern New Mexico, and it does so very much in San Miguel County. There is a serious question whether anything recognizable as an on-going Hispano culture, a cluster of institutions and practices, still exists in viable form, but people of Spanish surname and home language still remain in large numbers, although most are neither engaged in subsistence agriculture nor dwelling in rural areas. More detailed description of the inter-ethnic situation will be given shortly. At the moment it is important to see that much of the problem has economic and ecological roots. The more rational, commerce-minded Anglo-American pattern of agriculture, particularly of cattle raising, has succeeded the traditional Hispano-American pattern of small-scale riverine farming and upland grazing. Those Hispanos who are today successful cattlemen have been converted to the new pattern, at least in its technological and economic, and to some extent its social, aspects. It does seem, and other writers agree on this somewhat, that even if no Anglo invation had taken place, the combination of traditional methods of division of lands, upon the death of the father of a family, equally among all the surviving

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[43]Mosk, op. cit., p. 51.

children, with the traditionally high reproductive rates of these Hispano families, would have led to overcrowding, exhausting of natural resources, and economic decline. The Anglo intrusion merely hastened the decline, for the number of acres of irrigable land is essentially fixed, and the climate has long limited the carrying capacity of the range. If Anglo-American culture had never touched on the area, perhaps the people would have been content to struggle with the environment for a bare subsistence, with the Malthusian forces of malnutrition and disease keeping the number of people within limits the land could support. But this is all in the never-never land of what might have been, for the invasion did come, crowding on the land occurred, living standards and life expectancy did go up, and Mosk's problem of 1942 remains in 1966 in New Mexico and particularly in San Miguel County.

Fence Cutting and The White Caps

Although there is little written record of the invasion of the traditional grazing grounds of the Hispano sheepmen by Texas cattlemen, there is a burning memory of the conflicts that arose over the building of fences on the public domain and land grants by incoming cattlemen. In other parts of the West the fences came down only because President Cleveland gave a direct order for it to be done, and later McKinley and ex-cowboy Teddy Roosevelt continued to enforce the order. In fact, the real fight about fences in the land of Wyoming and

Montana was between open range cattlemen and "Nesters," homesteaders who fenced in their small farms.

In New Mexico, again unlike other areas, the cattlemen had to compete for the land against fairly well entrenched sheep ranchers. Although the Hispano patrones might frown upon the lower-class Comancheros and their openly helping the Comanches steal Tejano cattle out in the buffalo country, they were among the leaders in tearing down the cattlemen's fences in northeastern New Mexico. Fabiola C. de Baca quotes her father's cook, El Cuate, on this:

> The early livestock man had not needed fences, but the incoming cattle companies started building them. The New Mexicans were ready to fight for the land which traditionally had been theirs, and out of this grew up an organization of influential New Mexicans for protection against the usurpers. These citizens banded together and, by cutting down a few fences, discouraged fence building by those who had no titles for the land. Perhaps the building of fences had not been the main reason for the New Mexicans becoming irate. The cowboys of the cattle companies drove and killed sheep right and left, whipped the sheepherders and made plenty of trouble in other ways.
>
> Your grandfather, who was then running sheep in the Plaza Larga country, brought to trial a bunch of cowboys who had killed several hundred of his sheep. The cowboys were prosecuted, but the country was too vast for all the sheepmen to catch up with the marauders.[44]

Admittedly this is a partisan view of the conflict. Aside from the Comancheros there probably were other Hispanos who took direct action against cattlemen and their herds. Just as Hispano accounts of the period seldom mention overstocking or overgrazing by Hispanos, so the stories of the intruding cattlemen seldom show any unworthy conduct by Hispanos, "la raza

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[44] C. de Baca, op. cit., p. 50.

santa."

The background for strong prejudice against Texans or Tejanos, which shows up in these recollections, goes back in history well before the post-bellum intrusion of Texas cattlemen. In the 1830's there were several expeditions by combined military and commercial forces from the new Republic of Texas into northeastern New Mexico and into San Miguel County specifically. These were all defeated and some of the leaders were captured and humiliated before the populace in San Miguel del Vado and Santa Fe. There has always been considerable discrimination by Hispano New Mexicans between Texans and other Americans, although the difference has become blurred as Texans have become Americanized. Hispanos have seen all Anglo-Americans as hostile to them and a threat to their social, economic, and political domination. In any case, there was no question in the last decade of the 19th century that the "New Mexicans," meaning Hispanos, resented the intrusion of non-Hispano cattlemen.

The reaction of Hispano sheepmen to Tejano cattlemen did not remain just a conflict between the people in competition for the land. In fact, a movement arose among some Hispano inhabitants who soon began attacking any Hispanos who adopted fencing for any purpose. As seems always to happen in northern New Mexico, this essentially nativistic movement became a political force, a division within the Republican party, traditional party of the Hispano of the county until

Roosevelt, the New Deal, the Depression and the Dust Bowl. Again Fabiola C. de Baca is an excellent source on this:

> While I gathered material for this book, I made visits to men and women who were living in some of the San Miguel communities at the time of Los Gorras Blancas. Among them was Don Luciano Lopez, who is now past eighty and lives as our neighbor at El Valle.
>
> In 1890, Don Luciano was living at La Concepcion, about twenty miles east and south of Las Vegas. He tells that the citizens of the different communities who had sheep on the Ceja and Llano had banded together for protection against the building of fences on their grazing lands and to help each other with crops and farming in communities. They called the organization Caballeros de Labor, Gentlemen of Labor.
>
> The party served a good purpose, but as there is always some bad element in all organizations, politicians saw where they could gain prestige. In place of protection, this element wanted common pastures and since the cutting of fences on public domain had appealed to them, they carried the practice to the farming land of the communities. These men called themselves El Partido del Pueblo, the People's Party. It became a secret society. They sent anonymous letters to those not in their party, threatening their lives and telling them that their fences would be cut down, their homes and farm buildings set on fire. They carried out their threats. Don Luciano tells how they tore down his father's gristmill and burned his barns and corrals. I remember my grandmother telling us about their fences being cut down at La Liendre. She heard the bandits when they came and she wanted to go out and fight, but Grandfather knew it would be suicide. Next morning miles and miles of their pasture and farmland fences were cut into fragments.[45]

All through this woman's account of life two generations ago there is a careful separation of this Hispano population into the "good," "respectable," "influential" people and their opposite, the "bad," "disreputable" people. Only occasionally does she identify this as a class difference between the landed

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[45] Ibid., pp. 89-90.

gentry and the small-scale farmer-rancher. There never had developed in San Miguel County a full-blown feudal society of patron and peon, of haciendas and estancias, partly because the land was settled so late, really just a few years before American annexation, and partly because the wealthy patrones did not find the area very attractive, as Luis Maria Cabeza de Baca did not in the 1820's when the Comanches and Apaches stole all his fine horses and forced him to move back to Pena Blanca in the Rio Grande Valley.

Typically the Hispano aristocracy quickly adjusted to American domination, either assimilated rapidly into the upper echelons of military and civilian territorial American society, or assimilating these elements into its own established elite. As has been seen in this "rico" class's attitude toward Comancheros and to El Partido del Pueblo, or later toward the "radicals" of the New Deal, these people wanted very much to be known as law-abiding, respectable people and as supporters of an harmonious status quo in New Mexico and United States society. In the process they lost not only their influence over the lower class but also virtually all contact with it. The general feeling in the county is that they "sold out" the majority of Hispanos. The establishment of El Partido del Pueblo was the formal beginning of an independent political and social force, the lower class, often dispossessed of even a small farm, seen in racist terms by aristocratic Hispanos as only part Hispano, unlike the pure-bred upper

class who denied any Indian ancestry. This aristocracy has nearly disappeared today in San Miguel County, but it remained a strong force in the county for many years after the 1890's. The Romeros, the Cabeza de Bacas, the Montoyas are today school teachers, bakery owners, pharmacists, secretaries, middle class citizens with glorious memories, being challenged by and competing with grandchildren of poor sheepherders and fence cutters for even this middle status. It was in the 1890's that they began to lose their power and undisputed status. Of special interest is the reaction of this aristocracy to the rise of a popular movement opposing them.

> The respectable citizens could not go out at night without a body-guard and heavily armed. They did not know who the members of the gang were--in many cases they were the same neighbors who had been Los Caballeros de Labor, as it was learned later.
>
> These marauders wore white hoods over their heads when they were out pillaging and came to be known as Los Gorras Blancas, the White Caps.
>
> For protection, the good citizens formed a new party which they called El Partido de la Union, composed of members of both major political parties. They held community meetings and for protection they used a password in order to keep out those from the bad element who might seek admittance. Don Luciano served as secretary to El Partido de la Union in 1891. He tells that there were men whom they never suspected as belonging to El Partido del Pueblo in the new organization and they served as spies for the corrupt politicians. The wife of one of these men once confided to a neighbor about her husband's work. She was found out and was given fifty lashes as punishment.
>
> El Partido de la Union became strong, but in it were many from the other faction. Often they would get rid of the good citizens by breaking up the meetings with the pretense that it was late and proceed to

their own haunts to plan their maraudings.[46]

Factionalism in San Miguel politics still persists, and it is usually of the same order as in 1890, a coalition of the conservative upper and middle class Anglo and Hispano groups, the economically dominant segment, opposed to the majority, lower class people who have never fully succeeded in becoming the politically dominant group. Since the 1930's, the coalition has been of conservative Democrats and Republicans, and the opposition has been a local variety of populism, strongly anticlerical and generally Democrat in politics, on the liberal side.

The Gorras Blancas remained an active group through the 1920's, with accounts of their night-riding, fence-cutting, and barn burning taking up much front-page space in the local conservative daily newspaper, the Las Vegas Daily Optic. By that time the land grants had been alienated by court action, lawyer's fees, and tax sales, and the full results of Anglo domination had become clear. The subject of the White Caps, Las Gorras Blancas, is still a very sensitive one, such that one worker for this research could not even get his own grandfather to talk about the movement. The whole matter is too sensitive, the situation still an active one, with Anglo-Hispano relations remaining in a tense state. Probably the

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[46]Ibid., p. 90.

basic cause of the prejudice is competition for the use of land. Further investigation of the whole matter of inter-ethnic relations between Anglo and Hispano is needed, not only in this immediate situation, but in the Southwest in general. Only Watson and Samora in Del Norte, Colorado[47], and Madsen and associates in Hidalgo County, Texas[48] have tried to do serious, objective investigations of these relations. The present, basically descriptive study will hopefully point out many testable hypotheses on intergroup relations, a problem of some practical importance in northern New Mexico.

There are at least two hypotheses that can be derived from the foregoing outline of early Anglo-Hispano conflict in the county. The first is that direct competition for grazing lands, primarily Anglo cattlemen versus Hispano sheepmen, was a fundamental cause of subsequent hostile relations between Anglo-Americans and Hispano-Americans in the area. Related to this hypothesis is a second one, that the traditional Hispano patron-type leadership readily identified with and became a part of middle class Anglo-American society in New Mexico, leaving the empleados, employees, and other lower class Hispano-Americans leaderless and open to manipulation by more acculturated lower class Hispanos in both business and politics. As a corollary to both the above hypotheses, it has been noted

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[47] Watson and Samora, op. cit.

[48] William Madsen, The Mexican-Americans of South Texas (New York: Holt, Rinehart and Winston, 1964).

by Parish[49] and others[50] that non-Hispano Americans of German Jewish extraction, while apparently being one of the chief causes of the economic downfall of the small farmer-rancher, were accepted and treated as equals by Hispano society in general. Ferguson, in his fictionalized account of the downfall of the Hispano patron and the rise of the Jewish merchant in a village in New Mexico, emphasized the fact that both Hispano and Jew were outsiders to Anglo society and so related in an empathetic manner, even though Hispano culture was strongly anti-Semitic. The greater willingness of the Anglo of Jewish faith than the gentile Anglo to adopt the language and other aspects of Spanish culture must be taken into account also.

A final hypothesis, already stated, is that political radicalism in the county, with the rise of El Partido del Pueblo in the 1890's, and the present liberal left wing of the Democratic party, although a majority group, continues to be ineffective in gaining power because of a coalition of the economically dominant conservative Anglo and Hispano Democrats and Republicans who control politics in the county. The control has strong support from the state Democratic organization. The role of the New Mexico Cattle Growers Association cannot be discounted in this, nor can the sus-

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[49]Parish, op. cit.

[50]Harvey Ferguson, The Conquest of Don Pedro (New York: Morrow, 1954).

picion and hostility of the liberal Democrats of the Albuquerque metropolitan area toward any Hispano politicians and politics in northern New Mexico.

Much more frequent is overt expression of resentment over the presence of Anglo property-owners, usually cattlemen, on former land grants. In San Miguel County there have recently been several local meetings of people claiming to be descendants of Hispano grant holders and dwellers, working on plans to institute court and legislative action to regain title to these lands or compensation for their loss.

In Rio Arriba County the situation has gone further, with Hispano people claiming to be rightful owners of the Tierra Amarilla Grant, in October, 1964, setting up guard stations along U. S. Highway 285 at the border of the grant and seeking to collect fees for special hunting licenses for the area. Barns and haystacks of Anglo ranchers in the grant have been burned by unknown persons, although the Hispano sheriff of the county claimed there were no problems. Anglo ranchers armed themselves and waited with itching trigger fingers. Finally a state District Judge enjoined the Hispano claimants' group from interfering with state and county government functions. The extremists among the claimants had declared that they were not under the jurisdiction of the State of New Mexico, or even under that of the United States. They claimed that the Treaty of Guadalupe-Hidalgo, which formally ended the Mexican-

American War in 1850, made their claims a matter of international law, and they sought to appeal their case directly to the World Court.

San Miguel County has not seen such action, but there is much sympathy among Hispano people for the movement. The local District Attorney, Donald "Tiny" Martinez, had been attorney for the Tierra Amarilla claimants in their court battle eight years before. The main difference between the Tierra Amarilla Grant and the grants of San Miguel County is that much of the former land is well-watered, heavily grassed, with large amounts of winter precipitation while very little of San Miguel County, in grants or outside, has such valuable and attractive pasture. In northern Rio Arriba County, then, the richer physical environment has led to open conflict and much more hostile inter-ethnic relations than in drier San Miguel County. A thousand feet higher elevation and a more evenly distributed annual precipitation are posited here as more determining of the differences between ethnic relations in the two counties than are such historical factors as years of entrenchment of one group in a grant. Not much of the land in grants in San Miguel County is worth fighting for, either at a road block or in a courtroom.

CHAPTER V

CROP PRODUCTION IN SAN MIGUEL COUNTY

Although the general statement has already been made that crop production yielded in land use to cattle grazing, it is felt that a demonstration of the advance and decline of crop farming will be valuable for the purpose of this study. An analysis was made of all available agricultural records going back to the first U. S. Census made after New Mexico became a part of the United States, the 1850 Census. The Census statistics are the most reliable figures for county-wide crop production, and in most cases are the only records available. The various County Extension Agents did not make systematic crop reports of the county or its subdivisions in their annual reports. Census material is not available for smaller divisions than the whole county, with a few exceptions that will be exploited here. Records of crop production for individual farmers is strictly confidential material that this worker has been reliably informed only Bureau of Census employees may see and use.[1]

Appendix I gives the acreage, and where available, the actual amount of crops harvested for most of the crops produced at any time in San Miguel County. A detailed analysis of crop production is not essential for the present study. Trends, related to weather, land settlement, markets, and other possible factors,will be outlined. These are shown graphically in Figure 19.

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[1]Conversation with Robert Gray, Professor of Agricultural Economics, New Mexico State University.

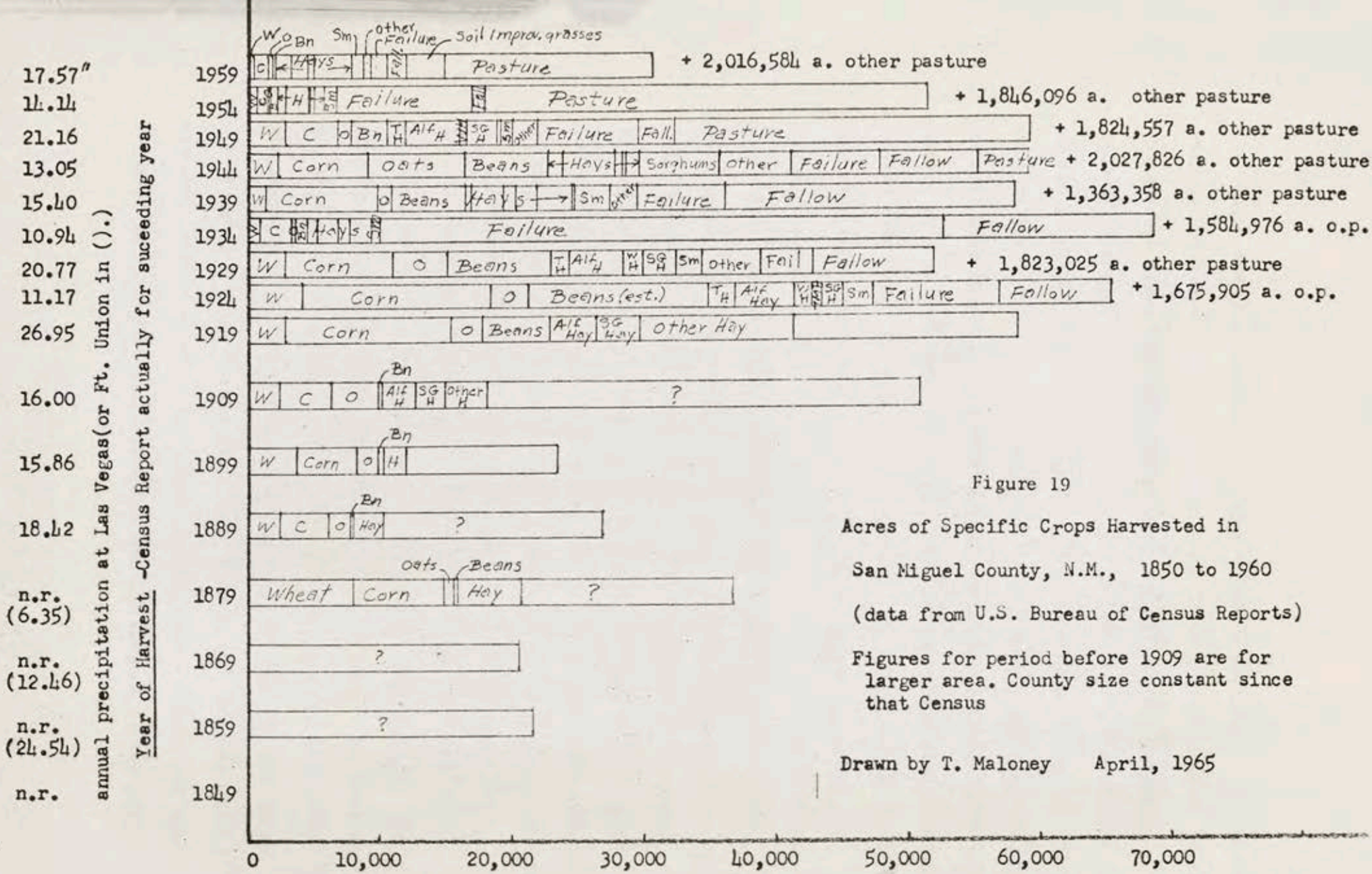


Figure 19

Acres of Specific Crops Harvested in San Miguel County, N.M., 1850 to 1960

(data from U.S. Bureau of Census Reports)

Figures for period before 1909 are for larger area. County size constant since that Census

Drawn by T. Maloney April, 1965

Abbreviations used:

W - all wheats
C - corn
O - oats
Bn - dry beans
Sm - sorghums
Other - other crops
TH - timothy and clover hay
AlfH - alfalfa hay
SGH - small grain hay
WH - wild hay
TmH - tame hay

Wheat and corn remained the major crops of the county from earliest records until the 1950's. The only other crops to which nearly equal acreage was given were dry beans, oats, and hay crops. Sorghums, already mentioned in the discussion of homesteading in the eastern part of the county by Southern immigrants, first appear as a crop of importance in the 1920's. By 1945 sorghums had become a major crop for the county, with approximately 6,000 acres harvested, mainly as livestock feed. In that year corn, dry beans, oats and hay crops each were harvested from about the same number of acres. By the 1950 Census, dealing with 1949 crops, corn and hay were the main crops, in terms of acreage harvested, with wheat and beans harvested occupying slightly less land. Sorghums had dropped back to a pre-World War II level of importance. By 1959, very little land, a mere 9,405 acres, had any crops harvested on it. Over half this land was used for hay crops. Interestingly enough, the sorghums harvested in 1959 remained about the same absolute amount as in 1949 and 1954, becoming again, because of the decrease in all other crops, a crop of equal importance to corn.

The proportion of harvested cropland that is irrigated has steadily increased since the war period, with 33.5% in 1949, 51.7% in 1954, and 52.7% in 1959. From this it can be inferred that dry farming is a past phase of crop raising in the county. The reasons for this may be complex, but at least one very important factor is the decreasing annual precipitation noted in the earlier section on the changing climate of the area. That this is not the only factor, however, is made clear by two facts of production. First, the 1944 harvest, in terms of acres harvested, was the largest in the past

40 years. Yet the precipitation that year was only 13.05 inches, well below the long term average. Lest it be said that this bountiful harvest was the result of accumulation of moisture from previous years, the average precipitation for the three years preceding the harvest was only 14.65 inches, again well below the then long-term average of 16.80 inches. An explanation here may rest on the economic boom of the war years, with 48,000 acres under cultivation in 1944.

But this does not account for the relatively small proportion of land that suffered crop failure, about 7,000 acres. It is true that much more land was put to agricultural uses in 1944 than in 1939, over 2 million acres as compared with approximately 1.6 million in 1939. Perhaps, as was reported earlier by Callon, newly farmed land has greater productivity than long-used land. But presumably much of this same land cultivated in 1944 had been cultivated in the other war years. In any case, 1944 is an exception to the trend of large crop failure and low productivity in below-average periods of precipitation.

Second, there is the case of the 1959 farm crop, with only 9,405 acres harvested, but the precipitation that year, 17.57 inches, well above the recent 1931-1960 mean of 15.3 inches, and the three year average before this harvest of 18.32 inches, this latter short-run mean above even the 1887-1946 mean of 17.80 inches. The percentage of acres of crop failure was low, a mere 11.7% compared to a 60.8% crop failure in 1954 and the long-term low of 8.96% in 1929. It appears that at least a temporary equilibrium has been reached, with cropland cultivated at a minimum in 1959 and crop failure also at a

minimum. If 1964 figures were available they probably would strengthen this idea that crop production has arrived at a point of minimum loss, and has lost much of its former speculative nature, associated in the western plains with dry farming of small grains.

Over the years 1924-1959 the average crop failure has been 29.7% of acreage cultivated. This figure should decline in future years, if the present trend to cultivate fewer acres and to irrigate a higher proportion of these acres continues. The irrigation resources of the county are limited, as has been noted previously. This would seem to imply that the crop raising potential of the county is also then essentially fixed.

Changes in Size and Number of Farms

Figure 19, Acres of Specific Crops Harvested, not only shows the changes in harvests of certain crops, all the major ones, but shows the drastic change in acreage under cultivation that took place beginning with the early years of the twentieth century. This change coincides with the period of greatest homesteading activity, from 1900 to the First World War. Before 1900 there was relatively little land in the county in farms. The logical assumption to make from this is that most of the land in the county was "free" land, open range in the public domain and in the land grants. With only 84,614 acres in farms in 1890 and 1,004,467 acres in farms in 1900, the move toward fenced grazing land and cropland can be seen dramatically. It was not until the end of the first decade of this century that the actual acres devoted to crop production rose from the nineteenth century range of twenty to twenty-five thousand acres, however.

From 1910 to 1954 the amount of land devoted to crop production remained within the range of fifty to sixty-five thousand acres, dropping down to approximately thirty thousand acres in 1959. While the amount of land cultivated remained high, the amount of cropland harvested fluctuated greatly. Although production figures of any reliability are available only for census years, that is every ten years to 1920 and ever five years since then, the disastrous crop failures recorded for 1934 and 1954 demonstrate sufficiently the effects of the physical environment on farming as an adaptive occupation in the county. There were 2,350 farms in 1934 but only 1,482 in 1939. This number rose slightly in 1944 to 1,671, partly because of the higher prices offered farmers in a war-time economy. But after World War II the decline in farms continued, with 1,050 in 1949, and 865 in 1954. Following the 1954 harvest, the smallest for which any records exist, the number of farms further declined to 732. One has to go back to 1890 to find a smaller number of farms in operation.

Throughout the first half of the twentieth century the size of "farms" which included crop and livestock grazing lands under private ownership, increased gradually, with a few slight regressions. Figure 20, Change in Average size of Farms, presents this increase in farm size clearly. There was a gradual change from 114.5 acres in 1900 to 884.2 acres in 1920, with a slight decline in 1910, probably caused by the large number of 160 acre homesteads established in the first decade of the century. Then a sharper increase to 1,143 acres in 1930, modified in 1925 by further homesteading, mainly of the quarter-section type. A return to smaller size farms in 1935, and

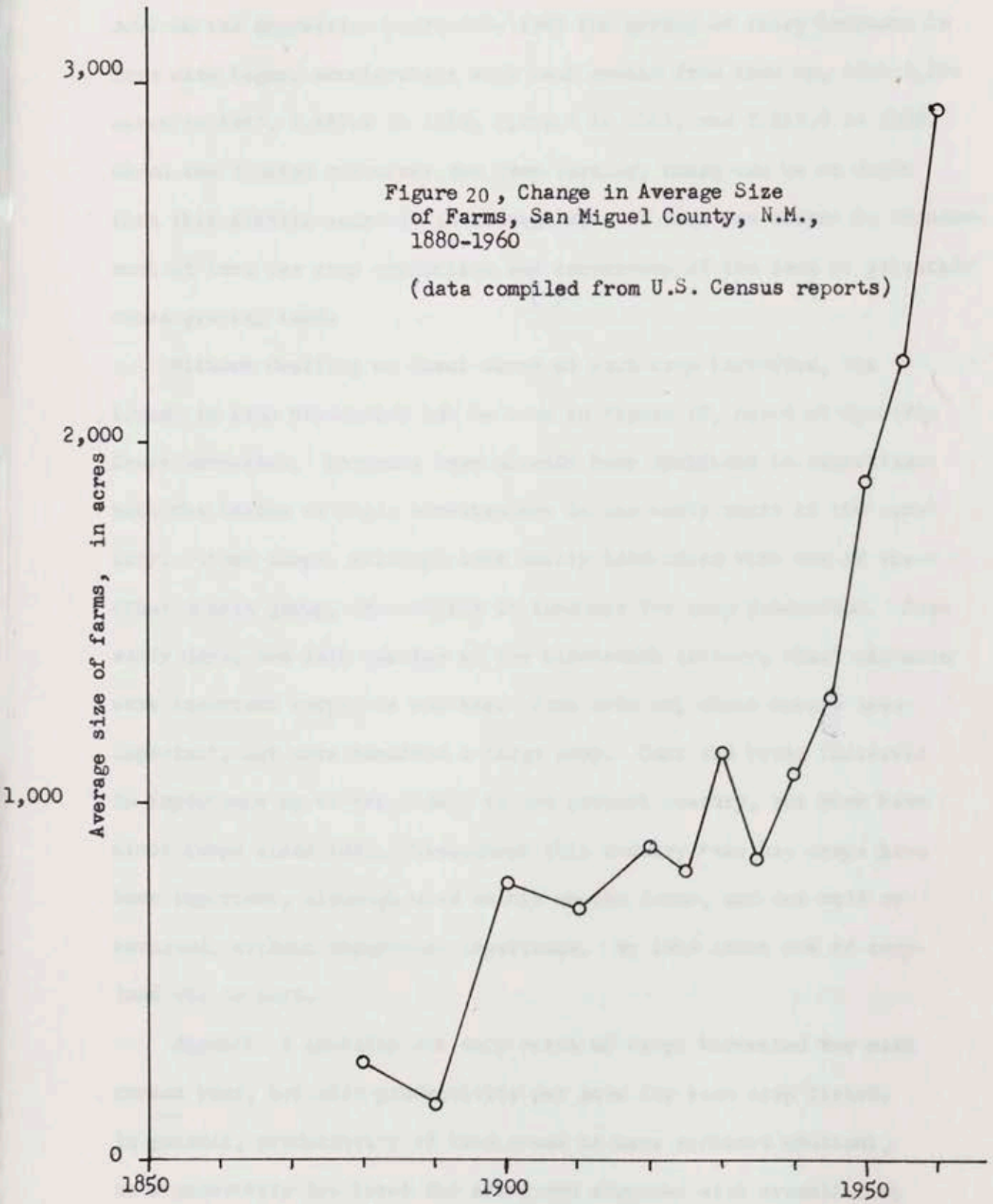


Figure 20, Change in Average Size of Farms, San Miguel County, N.M., 1880-1960

(data compiled from U.S. Census reports)

somewhat less the case in 1940, is accounted for by a "back to the farm" move in the depression years. By 1945 the period of sharp increase in farm size began, accelerating with each census from then on, with 1,286 acres in 1945, 1,887.5 in 1950, 2,250.7 in 1955, and 2,917.4 in 1959. Given the limited resources for crop farming, there can be no doubt that this drastic increase in average size of farm was caused by abandonment of land for crop production and conversion of the land to privately owned grazing land.

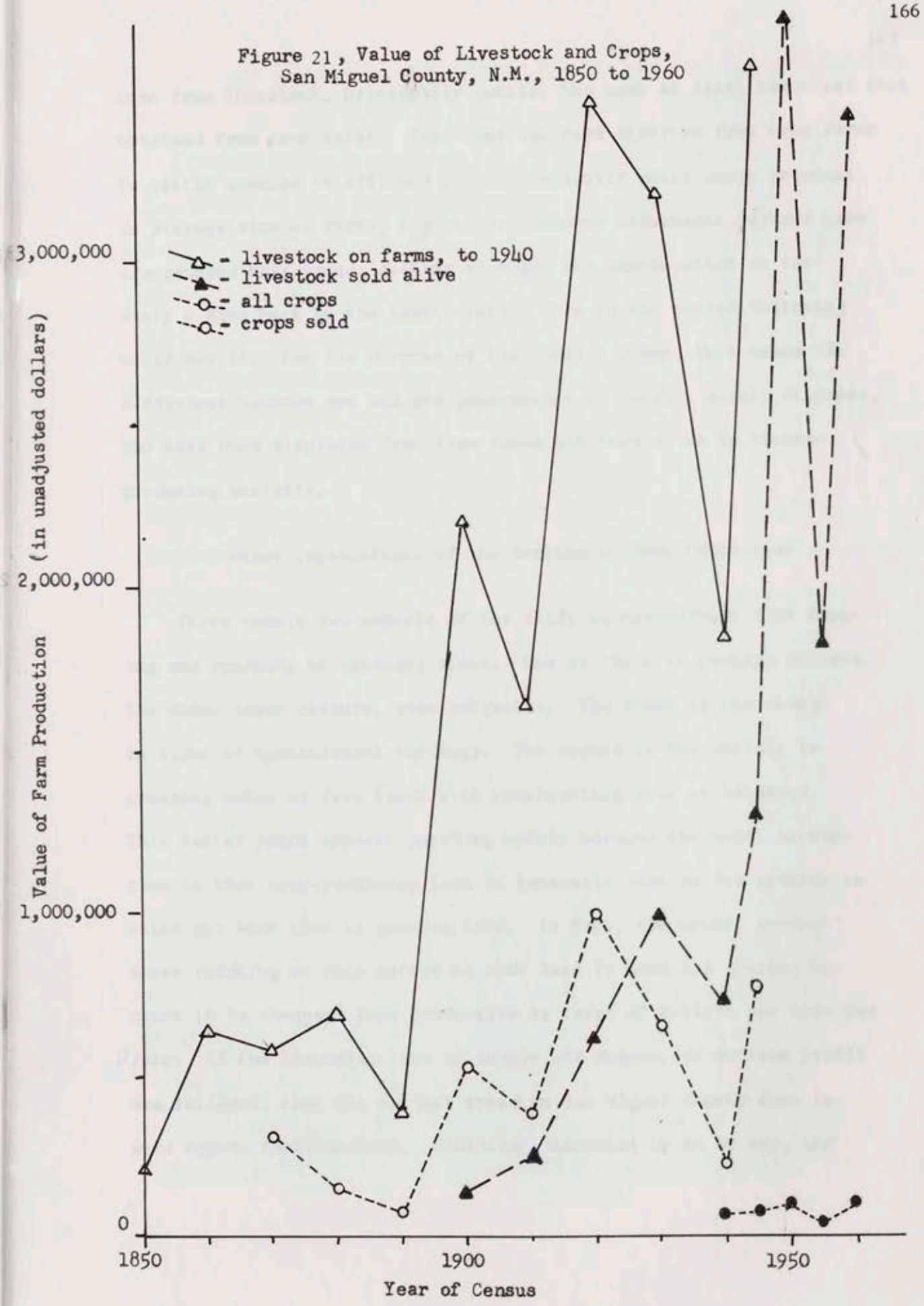
Without dwelling on exact acres of each crop harvested, the trends in crop production can be seen in Figure 19, Acres of Specific Crops Harvested. Sorghums have already been mentioned in connection with the influx of Anglo homesteaders in the early years of the century. Other crops, although less easily identified with one or the other ethnic group, show shifts in land use for crop production. From early days, the last quarter of the nineteenth century, wheat and corn were important crops, as was hay. From 1900 on, wheat became less important, but corn remained a large crop. Oats and beans increased in importance up to the middle of the present century, but have been minor crops since 1949. Throughout this century tame hay crops have been important, although used mainly on the farms, and not sold or bartered, without commercial importance. By 1959 about 60% of cropland was in hays.

Appendix I contains not only acres of crops harvested for each census year, but also productivity per acre for each crop listed. In general, productivity of land seems to have remained constant, at a moderately low level for all crops compared with overall crop

production in New Mexico. The figures for San Miguel County are similar to those of other areas of north-central New Mexico, but much lower than those of other areas of the state south and east of the region. As settlers have found after half a century or more of trial and error, San Miguel County is not suited to profitable crop production. This does not mean that people do not try to raise crops for market or home consumption. Far from that. In the spring of 1965, with May and June bringing nearly daily light rain showers, hundreds of acres not plowed for several years were cultivated and planted, gambling that enough moisture had fallen and would continue to fall to allow a good harvest by the end of summer. Call it optimism, a deep emotional attachment to farming as a way of life, or an urge to gamble. But in any case, it is very unlikely that San Miguel County will ever again have two thousand farms or sixty thousand acres of land cultivated, or fifty thousand acres of cropland harvested. The era of crop production as an important commercial venture, and that word "venture" is used deliberately, is over.

That crop production has always been secondary to livestock production is shown in Figure 21, Value of Livestock and Crops. Whether one compares total production of each or total sales of each, the economic importance of crop farming has never been more than half that of livestock. Only in 1870 was even this situation reached. Then San Miguel County was busy furnishing food and fodder to Army posts centered around Fort Union. Although the value of livestock has fluctuated greatly, throughout the twentieth century it has overwhelmed the value of crop production. Since 1940 in-

Figure 21, Value of Livestock and Crops, San Miguel County, N.M., 1850 to 1960



come from livestock, principally cattle, has been at least ten times that obtained from crop sales. That land has been diverted from crop farms to cattle ranches is affirmed by the previously noted sharp increase in average size of farms, Figure 20. Rancher informants perhaps have exaggerated this trend, seeking to place its acceleration at too early a date back in the 1920's rather than in the period following World War II. For the purpose of the present study, this means the difference between one and two generations of people, mainly Hispanos, who have been displaced from farm lands and farming as an income-producing activity.

Other Implications of the Decline in Crop Production

There remain two aspects of the shift in agriculture from farming and ranching to ranching alone. One of these is perhaps obvious, the other seems obscure, even enigmatic. The first is the change in sizes of agricultural holdings. The second is the rapidly increasing value of farm lands with accelerating size of holdings. This latter point appears puzzling mainly because the usual assumption is that crop-producing land is generally seen as far greater in value per acre than is grazing land. In fact, the usual, common-sense thinking on this matter is that land is used for grazing because it is cheaper, less productive in terms of dollars per acre per year. If the Ricardian laws of supply and demand, of optimum profit are followed, then the present trend in San Miguel County does indeed appear contradictory. Classical economics be as it may, the

"existential" situation in the county is that land becomes more valuable when it is converted from crop production to beef production.

Although categories of sizes of farms change from one Agricultural Census to another, comparisons of ranges of sizes reported in decennial censuses show a strong shift in the past sixty years away from small and medium sized farms to large ones. In 1900, there were only 25 farms with a thousand or more acres on them. Except for a slight drop in 1940, the number of these large farms has increased steadily, with 38 in 1910, 102 in 1920, 152 in 1930, 144 in 1940, 191 in 1950, and 227 in 1959.

During the same period the number of "homestead" sized farms, that is those in the range of one to five hundred acres, has increased and then decreased as croplands have been brought under cultivation in the homestead movement of the first twenty or thirty years of the century, and then abandoned progressively in the past thirty years. Thus, in 1900 there were 413 farms of this middle range, 738 in 1910, 858 in 1920, 686 in 1930, 508 in 1940, 355 in 1950, and 276 in 1959. There are now fewer farms of this size in the county than there were in 1900.

Given the fact that there are not now, and probably never were cattle operations in the county of commercial importance on middle or small size farms, since there are few rich, irrigated pastures and no feed lot operations, it seems fair to deduce from the increase in large farms that more and more croplands have become parts of cattle operations of large scale, "extensive" land utilization. Rancher informants freely admitted that much of their land

had been acquired from abandoned homesteads, either on former public domain or former land grants.

To complete the description of changes in sizes of farms, note is made here of the decline in very small agricultural holdings, those of ten acres or less. These small holdings are seen by some as the backbone of traditional Hispano subsistence farming. If this inference is true, then the marked decline of this category of land holdings shows that such subsistence farming is today almost non-existent in the county. In 1900 there were 378 farms of ten or less acres. By 1910 the number had decreased to 262, by 1920 to 191, and by 1930 to 154. It increased slightly to 191 again in 1940, but then continued to decline in 1950 to 90 such units and only 30 in 1959. So it is that today there are less than one-tenth as many very small farms in the county as in 1900. A range of farm sizes intermediate between the very small and the medium or homestead size, that is between ten and a hundred acres, has declined much less markedly than either of these two groups. In 1900 there were 450 of these moderately small farms; in 1910, 383; in 1920, 380; in 1930, 528, a large increase; in 1940, 512; in 1950, 304; and in 1959, 166. With few exceptions these modest-sized holdings cannot be considered as bases for commercial agriculture, now or in the recent past. A few consolidated irrigated strips and a very few dairy farms seem the only economic producers in this range of holdings. The increase in use of these modest holdings in the 1930-1940 period further demonstrates the "back-to-the-farm" movement of people during the depression years, which in this county extended from the middle

1920's until the beginning of World War II.

The only class of farm size that has not changed over the past forty years is that of moderately large holdings of from five hundred to one thousand acres. These increased from 31 in 1900 to 47 in 1910, then increased rapidly to 112 in 1920, but have remained at between about 100 to 150 since that time. In 1959 there were 93 such farms. No explanation can easily be found for the stability of this type of farm. Perhaps these farms are used for small-scale livestock raising, or perhaps they contain sufficient productive cropland to continue functioning as farms. They may be run by farmers who have other sources of income from work off their farms. In any case the class of farm size continues to remain even though consolidation of holdings in larger units has virtually eliminated the very small holdings, and decreased the number of small and medium size holdings. Since Census returns make identification of specific farms impossible, it is not possible to determine which specific farms have been taken over by which larger ones. The trend is clearly for large landholders to take over small holdings, eliminating the small holders from the use of the land. All information from ranchers, bankers, and other informants confirms this, so that the immediate subjects of this research, commercial cattle ranchers, can without question be said to have gained control of most of the land formerly used by crop producers.

As the land has shifted in use from intensive crop farming to extensive livestock grazing, the value of the land has increased, as has total value of farms and buildings. Figure 22,

Change in Total Evaluation of Farms, shows a fluctuation in county-wide value of farms from 1900 to 1940, with less than $2,000,000 in 1900, rising to over $14,000,000 in 1920, probably as a result of the homesteading boom in these two decades. Then total evaluation fell off until 1940, reaching a low of only $6,000,000 that year. But from that time on the value of farm lands, which of course includes all cattle ranches, has literally skyrocketed. Between 1950 and 1955 the increase declined slightly, but the upward trend became strong again after that poor agricultural year. By 1959 the total evaluation was over $35,000,000, at the same time the number of farms was less than at any time since 1900.

The average value of land and buildings on farms, shown for the years since 1900 in Figure 23, followed the same pattern as did overall evaluation. Fewer people using larger units of land had obviously increased the unit value of the "farms," but also the value of the land over its value for intensive use. The lowest average value for farms was in the midst of the depression and Dust Bowl drought, 1935, slightly over $2,000 per farm. After 1945 this figure also shot up, within fifteen years reaching $45,000 per farm. One further indicator of farm value, average value per acre is shown in Figure 24, for the years 1900 to 1960. The variations in value since the turn of the century show clearer than in the two previous ways of evaluating farms. With the homesteading rush on, land reached an average value of almost $10 per acre by 1920, but fell off as the homestead movement ceased expanding and then retreated, reaching a low of $3 per

Figure 22, Change in Value of Farms - Total evaluation, San Miguel County, New Mexico, 1850-1960

(data from U.S. Census materials, uncorrected for changing value of the dollar)

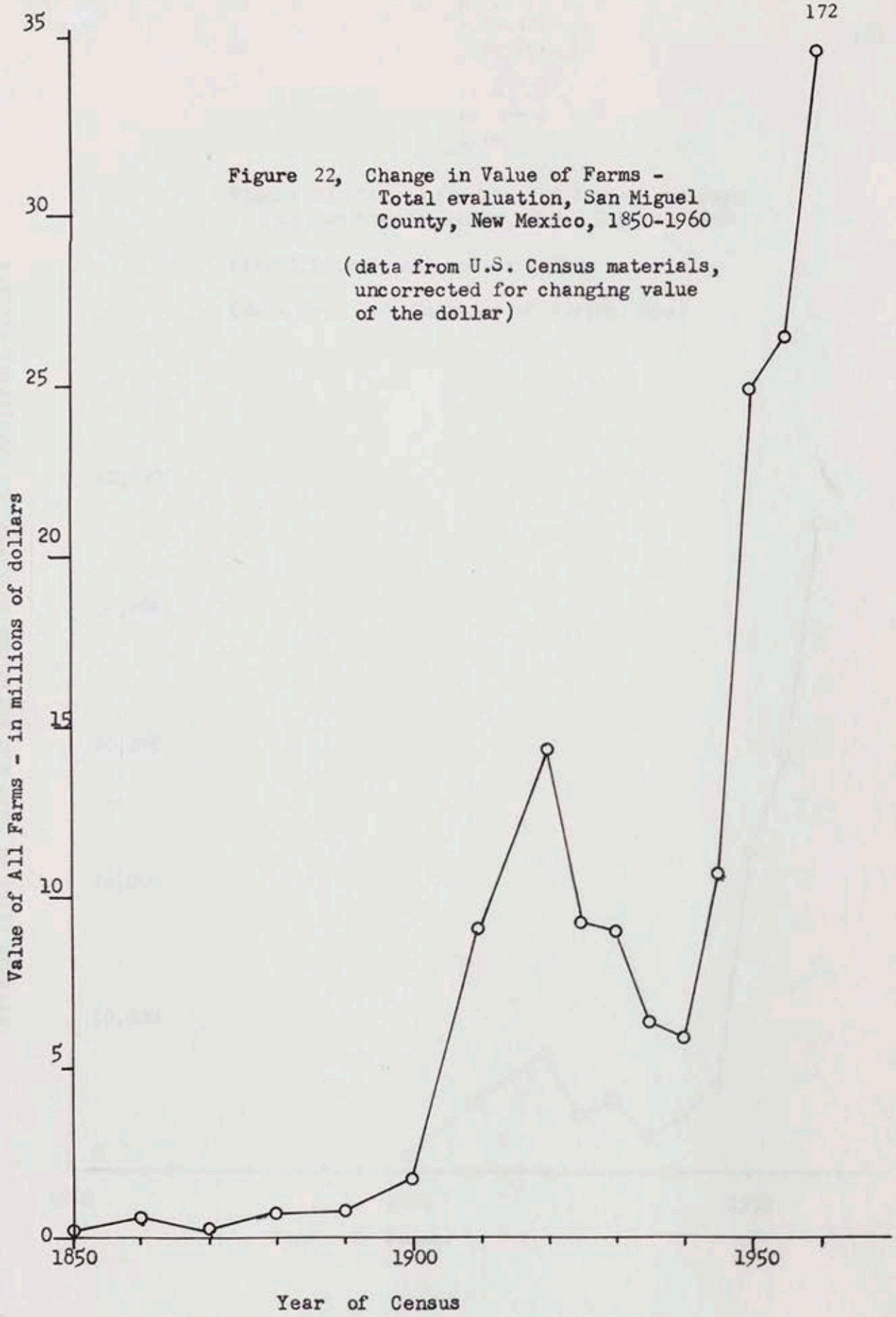
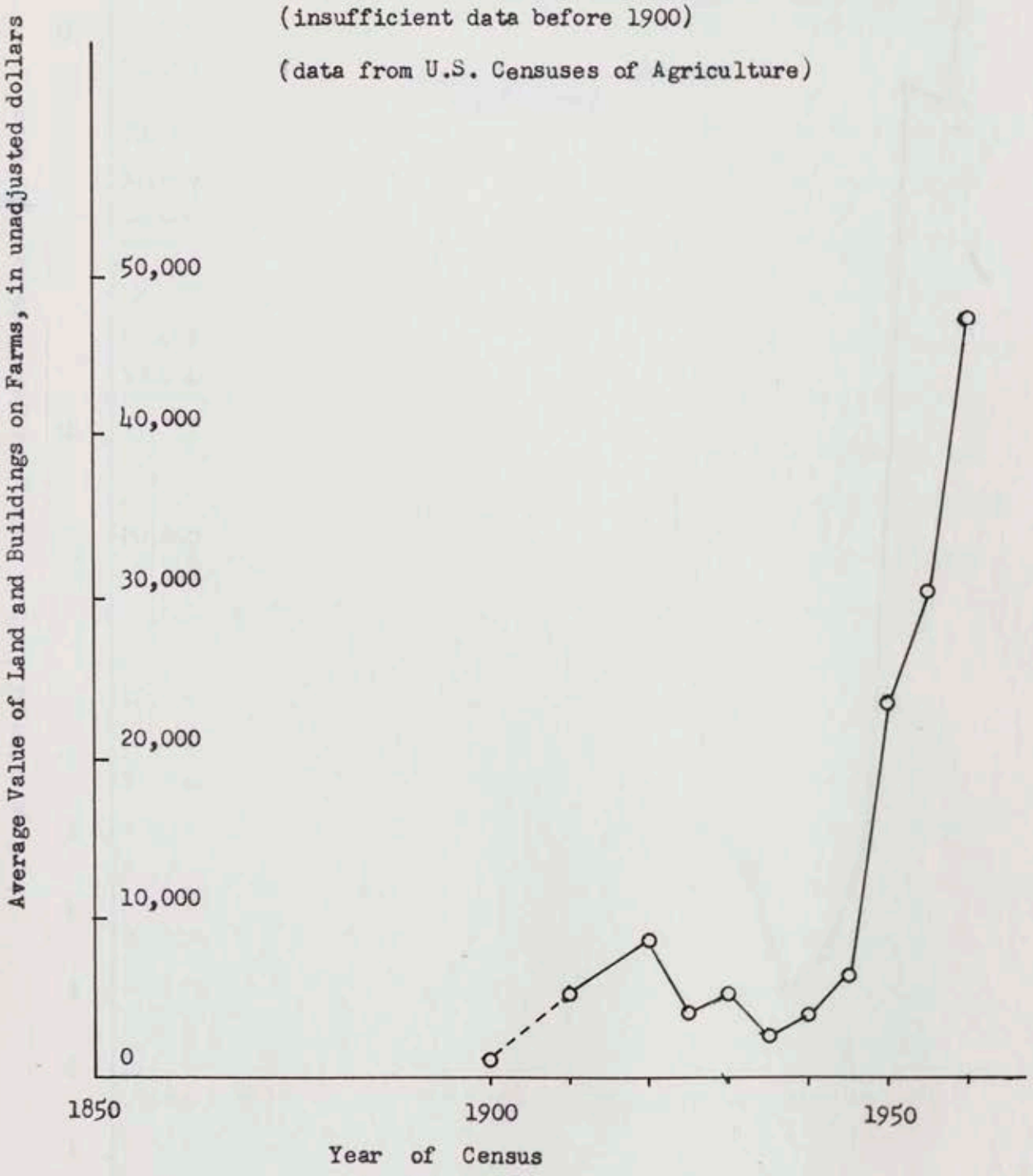


Figure 23, Change in Value of Farms, per Farm in San Miguel County, N.M., 1900 to 1960

(insufficient data before 1900)

(data from U.S. Censuses of Agriculture)



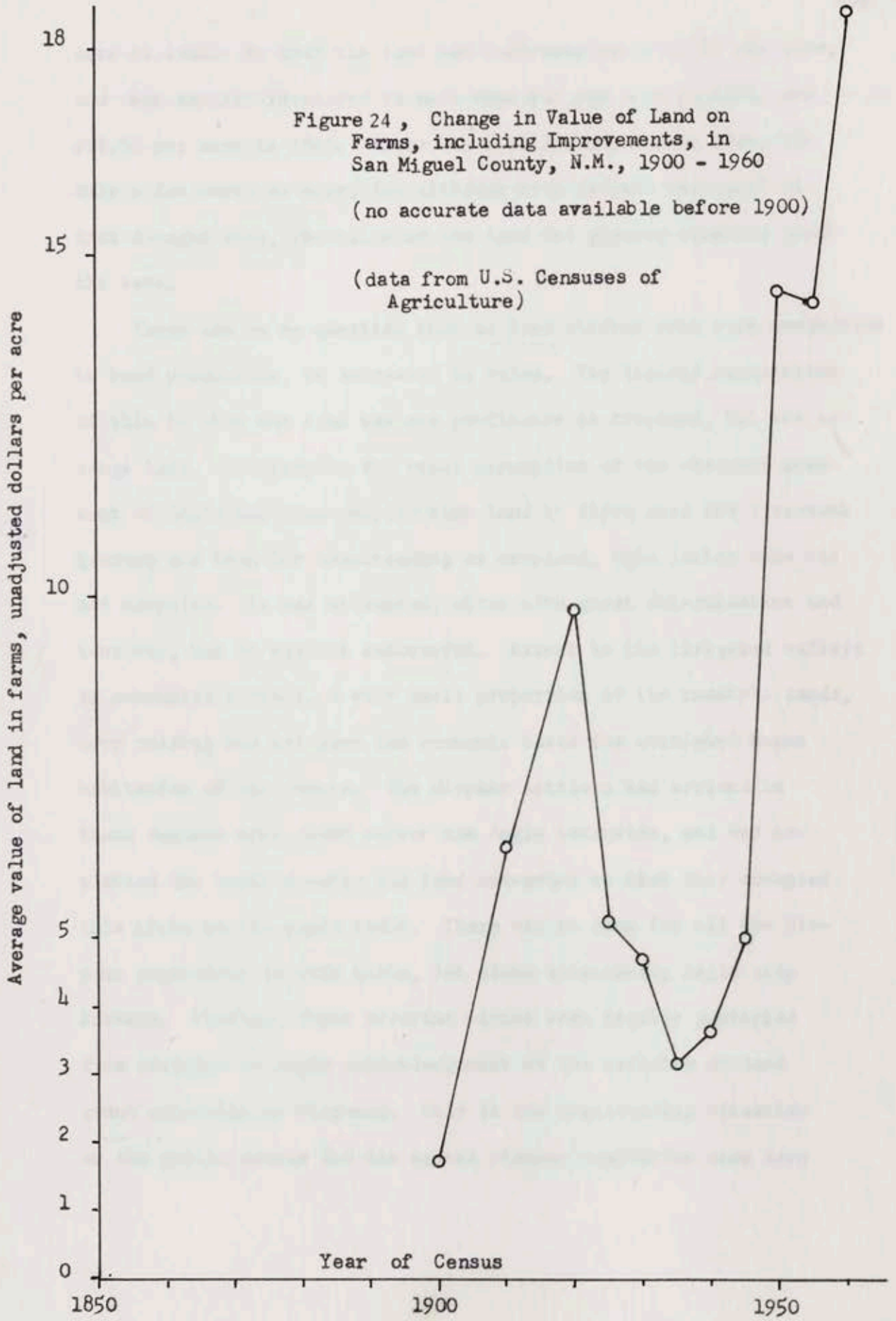


Figure 24 , Change in Value of Land on Farms, including Improvements, in San Miguel County, N.M., 1900 - 1960

(no accurate data available before 1900)

(data from U.S. Censuses of Agriculture)

acre in 1935. By 1945 the land had increased again to $5 per acre, and then rapidly increased to more than $14 per acre in 1950, and $18.50 per acre in 1960. There was a slight decline in 1954, but only a few cents an acre, for although crop failure was great in that drought year, the value of the land for grazing remained about the same.

There can be no question that as land shifted from crop production to beef production, it increased in value. The logical explanation of this is that the land was not profitable as cropland, but was as range land. Contrary to the usual assumption of the westward movement of Anglo-American peoples that land is first used for livestock grazing and then for homesteading as cropland, this latter mode was not adaptive. It was attempted, often with great determination and tenacity, but it was not successful. Except in the irrigated valleys of perennial streams, a very small proportion of the county's lands, crop raising has not been the economic basis for continued human habitation of the county. The Hispano settlers had arrived in these valleys many years before the Anglo intrusion, and had exploited the limited water and land resources so that they occupied this niche to its upper limit. There was no room for all the Hispano population in this niche, let alone late-coming Anglo crop farmers. Further, these riverine niches were legally protected from invasion by Anglo acknowledgement of the validity of land grant ownership by Hispanos. Only in the homesteading situation on the public domain did the excess Hispano population come into

competition with the Anglo intruders. There the physical environment stopped both ethnic groups from creating niches based on crop production, and both were succeeded by cattle ranchers of both ethnic groups, including a few former homesteaders who had the means and desire to convert to this different, extensive land utilization.

CHAPTER VI

ECOLOGICAL ZONES AND CATTLE RANCHING

The chief purpose of this research is to demonstrate the land-man and interhuman relationships termed ecological, to show the web of existence between physical environment and cattle ranching on the one hand, and between groups engaged in cattle ranching on the other. Variations in the physical environment in San Miguel County are basically caused by differences in elevation, which in the Mountain Zone combine with irregular or rough terrain to further limit cattle production. Variations in the human environment result from historical processes interacting with the physical environment.

Essential to the study are the identification and location of cattle ranchers in the county. The results of a census conducted in the course of this research are presented first in this chapter.

A Census of Cattle Ranchers

A census of cattle ranchers was the first step undertaken in studying ranchers per se. From two existing lists of cattle ranchers a single list was made. The first of these lists was from the local Kiwanis Club, its mailing list of invitations to a "Ranchers' Day" luncheon in 1963. This list had been compiled by Jonathan Nunn, then loan officer of one of the two local

banks in Las Vegas, and William Erb, a Las Vegas realtor, both men themselves part-time ranchers. It was considered by the president of Mr. Nunn's bank to be a current list when field work in this research began in the summer of 1964. The second list was of almost the same length, over a hundred names, and had been compiled, or rather one should say accumulated, over the years by several successive County Agricultural Extension Agents. These two lists were submitted to two independent authorities on ranching for judgement as to who on them really are ranchers. One informant was Mr. Nunn, mentioned earlier, who has since moved from Las Vegas to Tucumcari, a smaller city just east of the county. The second authority was W. O. Culbertson, Jr., who has engaged in cattle ranching in the county since 1946. He is chairman of the New Mexico Cattle Sanitary Board, and has been active as a state representative and candidate for governor of New Mexico. His main qualifications for the task of evaluating lists of ranchers were that he knows the cattle business and also knows nearly every cattleman in the county personally.

These two men, first Culberson, then Nunn, examined the original two lists with this writer present. By combining their judgements with information obtained from local informants later in this research, a final list of 121 cattle ranchers was obtained. No doubt a few people have been left off, and equally likely, a few are on the list developed for this research when they should not be. The only other person who knows in any detail all the ranchers of the county, William Erb, balked when

presented with the original combined lists, asking to be excused from cooperating because he didn't have time. He seemed to possess much more information on individual ranchers than the other two initial informants, but he was unwilling to take the time to help. This was the only case in this research where lack of cooperation was found.

Classification of Ranchers

Both Nunn and Culbertson were asked to rank the men they considered commercial cattle ranchers into small, medium and large size of operations. Using these two experts and my own judgement, the criteria for classes of ranchers was established as follows:

1. Small - normally has less than 100 mother cows
2. Medium - normally has 100 to 350 mother cows
3. Large - normally has over 350 mother cows

Using these criteria, 100 of the 121 doubly-affirmed ranchers were classed in the following numbers:

1. Small - 47 total, with 12 Anglo and 35 Hispano
2. Medium - 42 total, with 23 Anglo and 19 Hispano
3. Large - 11 total,with 9 Anglo and 2 Hispano

Of the 21 not identified by size, all have been affirmed as known commercial beef cattle ranchers, but neither informant knew the actual size of operations. It does not seem likely that any of them are medium or large size operators. Perhaps they can be safely added to the total number of small ranchers. If they were large or medium sized,they would undoubtedly be known better by one

or both informants. Only 4 of these unclassified ranchers were of the Anglo cultural group, with the remaining 17 being of the Hispano group.

The 1959 Agriculture Census shows only 44 ranches, or farms, having 100 or more cows as compared to 53 in this study.[1] The difference may be from growth of larger operations since 1959 or methods of acquiring data, or both.

Analysis of Census

From this initial census and classification it is clear there are ethnic differences not only in size of operations, but also in other economic factors that related to such size. Since virtually every informant has agreed that a minimum herd of 100 to 125 mother cows is needed for the traditional and still most common cow-calf operation to produce a return that at least breaks even on investment, those ranchers with fewer than 100 mother cows may be considered marginal operators. In this category are found nearly half of all Hispano ranchers, 35 out of a total of 73. If the unclassified ones are counted as small operators, then 52 out of 73 Hispano ranchers may be called marginal or submarginal.

From the 1959 Census of Agriculture ninety-two farms or

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[1] U. S. Bureau of the Census, U. S. Census of Agriculture: 1959. Vol. I, Counties, Part 42. New Mexico (Washington, D.C.: U. S. Government Printing Office, 1961), p. 141.

ranches had between thirty and ninety-nine cows. Approximately half this number, or 47, were so classified by informants for the present research. Presumably the other 45 people possessing some cattle are no longer in the cattle business, or were eliminated from consideration because such business produced only a small part of their income.

If the fifty-one cattle owners with only thirty to forty-nine cows are omitted, then the 47 small, full-time operators of this study is approximated, with forty-one cattlemen possessing fifty to ninety-nine cows in 1959. Combining with those ranchers reported as having 100 or more cows, the total in 1959 is then 85 operators with fifty or more mother cows. This is considerably lower than the 100 fully classified ranchers of this study, or the 121 total commercial operators, to say nothing of the total of all commercial and hobby-ranchers, 136. Obviously the census of this study may include some operators with fewer than 50 mother cows.

According to the 1959 Agricultural Census, there were 307 farms with nine or fewer cows, 97 with ten to nineteen, 60 with twenty to twenty-nine cows, from a total of 600 farms with cows.[2] Thus, 464 farms or ranches, over 75% of all cattle operations, had less than thirty mother cows.

In the other two categories of operations, large and medium, there is no question that a fairly good living can be made in a normal year. But then in these categories the ethnic composition is quite different from that of the small operations. In the medium size operations there are about as many Anglo as Hispano ranchers,

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[2] Ibid.

23 as opposed to 19. Roughly speaking such operations call for an amount of land controlled and utilized upward from 4,000 acres, with most ranches considerably larger than this minimum figure.

When one comes to the large size operations, the lack of Hispano operators is evident, only 2 such operators out of a total of 11. Both of these men are decidedly untypical of the Hispano population of the county, very marginal to it. More will be said later of these operators, but at the outset an hypothesis may be put forth, based on an overview of field work done in this research. This is that the identification by self in, and practice of, Hispano culture decreases with the number of cattle possessed, a quantity roughly showing the degree of involvement in commercial ranching and in economic and other aspects of Anglo-American culture as seen in the American Southwest.

Ranchers not included in the Census

Two groups of agriculturists classifiable as cattle ranchers have deliberately been eliminated as much as possible from the whole study. These are, first, very small operators who have other, much larger sources of income than sales of cattle and calves, and, second, so-called "hobby" ranchers, wealthy Texans and other absentee owners who use cattle operations as a means of decreasing taxable income. Both groups produce some commercial cattle, but neither is ecologically relevant since neither can be said to be contending with the physical environment for a livelihood.

As of 1964 there were 15 of the hobby type ranches, all of them of Anglo ownership. Seven of these were large scale operations, two

medium scale, one small scale, and five unclassified. Most of these, then, are operations utilizing large amounts of land. They do have an ecological side-effect on serious commercial operations in taking up and competing for grazing lands. This competition is emphasized by the unrealistic prices these hobby ranchers offer to pay and do pay for land in large parcels. The normal price of good grazing land in the county is $15 to $25 per acre. These hobbyists offer to pay anywhere from $40 to $55 per acre. They have continued to tempt successfully some ranchers to sell out to them rather than to commercial ranchers, who cannot afford to pay this price for land, cannot justify it financially in return on capital investment.

In two other ways, the first not directly relevant to this study, the hobby ranchers have an effect on the population of the rural areas. They do provide employment for a small number of ranch hands to carry out the expensive and extravagant operations. Also they have taken pressure off the land, acting, often intentionally, as unofficial conservation agents for the grasslands of the county. A rough estimate of the amount of grazing land taken over by these hobbyists in the county would be about a third to a half, including many abandoned riverine Hispano village sites. There is an intercultural effect these people have, too. They have become the focus of Hispano resentment of Anglo intrusion and succession to what are considered by some Hispanos as rightfully and legally Hispano land. There is fear and respect for these hobbyists, and a fatalism that sooner or later they will take over all the good grazing lands of the county, including many good commercial ranching operations. The

120 years of frustration and bitterness many Hispanos feel toward Anglos is vented freely toward these "Texans," who are fair game for harsh words and other hostility by many Anglo inhabitants of the county too.

In all, then, there are 136 ranching operations generally agreed to be large enough to include as significant in cattle raising in the county, 121 serious commercial operations from which the operators earn their livings, and 15 hobby operations. Little more will be said of the latter group in this study, except in terms of occasional relevance such as has been stated in the preceding paragraphs.

The 1959 Census of Agriculture, it will be remembered, stated that there were 302 livestock ranches with 50% or more of all farm product sales from livestock or livestock products. This number includes not only cattle and calf sales, but sheep, lambs, wool, goats, mohair, hogs, pigs, horses, mules, and burros. Subtracting the 136 cattle operations enumerated in this study, there are, then, 166 submarginal operations, mostly very small places, which only can be called ranches in a flattering sense. With the Census of Agriculture requirement of at least 100 acres of land for such a"livestock ranch," many people in the county could qualify as ranchers. It is obvious that such people do not depend on raising cattle for a living. They are very much peripheral to ranching life in the county, although they may practice many of the external aspects of ranching culture, such as dress, type of dwelling, social life, and the like. These are the "drugstore cowboys," along with other inhabitants who don't even have a single cow to their names, and both are scorned by the commercial rancher. They are the ardent rodeo fans, the members of

the New Mexico Mounted Patrol, a "Kentucky Colonel" type of honorary group. They include also, of course, many of the less affluent people of the county, almost entirely Hispano, who have low-paying jobs, usually in non-agricultural work, and who supplement their meager incomes with a few sales of livestock products. But they are not the part of the population who earn the major part of their income from raising beef cattle, and hence they are not within the scope of the present research, numerous though they are in the county.

Table VI, Classification of Cattle Ranchers by Ethnicity and Zone of Operation, combines cultural, economic, and habitat factors. It is the final result of the census of ranchers. Three specific factors are involved, ethnicity, size of operations, and location of operations. As the table illustrates, there are distinct relations between these factors, a combination of natural and cultural influences.

From Table VI one can readily see that the Mountain Zone is overwhelmingly a place of smaller ranching operations. Not only that, but only three of the ten Mountain Zone ranchers are of the Anglo ethnic group. Considering that 121 ranchers have been classed as commercial in the county, only 10 ranchers, a very small part of the ranching population, having very few cattle, are present in the Mountain Zone. In the general, overall view of the county, Mountain Zone ranching is not important commercially. There are only two medium scale ranchers in the Mountain Zone, one of each ethnic group.

Classification of Commercial Cattle Ranchers by Ethnicity and Zone of Operation

Size of Operations		Total	Zone of Operations: Mountain	Plateau	Plains	
Small	Anglo	12	2	9	1	
100	Hispano	35	6	19	10	
cows	All	47	8	28	11	
Medium	Anglo	23	1	15	7	
100-350	Hispano	19	1	9	9	
cows	All	42	2	24	16	
Large	Anglo	9	0	2	7	
350+	Hispano	2	0	0	2	
cows	All	11	0	2	9	
	Anglo	4	0	3	1	
Uncl.	Hispano	16	0	10	6	(plus 1 unclassed
	All	20	0	13	7	by zone)
	Anglo	48	3	29	16	
Total	Hispano	72	7	38	27	
	All	120 (121)	10	67	43	(plus 1 unclassified Hispano)

Hispano ranchers dominate the Mountain Zone, with 8 out of 10. They also dominate small scale ranching in the other two zones, Plateau and Plains. With few exceptions, most of these small scale Hispano ranchers live in riverine villages of the respective zones. In fact, many of the Hispano ranchers classed as being in the Plateau Zone might as readily be classed as Plains, since they tend to live in villages along the Pecos River, in the transitional area between these two zones, where the Plateau Zone slopes off southeasterly and gradually into the Plains Zone. The river valley is a Plains Zone enclave, and the mesas surrounding it are Plateau Zone in character. Those whose regular grazing lands are known tend to be about half Plateau land users and half Plains. The division was made from limited knowledge of some of the ranching operations.

Among medium scale operators, Anglo ranchers dominate by a majority of 15 out of 24 in the Plateau Zone. There are just about as many of one group as the other among medium scale operations in the Plains Zone. It is only in large scale operations in the eastern part of the county, in the Plains Zone, that the Anglo ranchers overwhelmingly dominate the Hispano. There are only two large scale operators in the Plateau Zone, both Anglo. There are no large scale operations in the Mountain Zone. In considering the total number of ranchers, of all sizes of operations, in each zone, the final part of Table VI, it is obvious that there are many more ranchers in the Plateau Zone than in either the Plains or Mountain Zones. Over half the total of 121 commercial ranchers, 67, operate

in the Plateau Zone. However, not to exaggerate this figure, nearly all the remaining 53 identified ranchers operate in the Plains Zone, 43 altogether.

There may be some question of the value of modalities, since, as in the above comparison, they tend to distort the situation. But it is still worth noting that practically all Hispano ranchers are small or medium scale operators of the Plateau and Plains Zone. The typical Hispano rancher can then be said to be a person having slightly over a hundred mother cows, grazing them in the Plateau Zone. He will, as noted previously, reside in a river village, or very near a settlement.

Using this same observation of modal categories and compromising for typicality on an average of modes, the typical Anglo rancher would appear to be a medium sized operator, with a number of mother cows toward the middle of the range of 100 to 350, probably around two hundred cows. He, too, is typically a Plateau Zone operator. The main difference is a slightly larger scale of operation, in a modal sense, than his Hispano parallel. Residence is usually in an isolated ranch house for the Anglo rancher, some distance from any settlement. This last is true even in the Mountain Zone.

The ethnic difference in settlement pattern is clear from field observations. The Hispano rancher tends to live within a short distance of other people, either in a village, or at least within sight of other dwellings in a dispersal that still is considered a community. The main exception to this is among some, but not all, of the Hispano Plains ranchers, particularly some of the medium

and both of the large scale operators. If a man wants to live in a location central to his operations, then on the Plains the larger operations call for living some distance from other people. The carrying capacity of most of the Plains Zone is about one cow per sixty to seventy acres, a considerably lower capacity than either of the other zones, making for more extensive holdings for a given size of operations. In terms of acres used, the Plains is obviously predominantly large and medium scale operations. Certainly, the nine large operators on the Plains use far more land than do the eleven small operators.

Ranching in the Mountain Zone

A large part of this zone is in the Santa Fe National Forest and is broken, mountainous terrain. Because of both these factors, the ranches are situated just east of the Pecos Ridge, adjacent to the National Forest, in the valleys of the several small streams of the zone. The ranches are small in size, relying on valley pastures in the winter, together with whatever hay was harvested the summer before on the same well-watered land. Summer pastures are usually in the National Forest, where only a small number of cattle may be grazed with any one permit. The largest grazing permit for the summer of 1964 was for 100 head of cattle, with most of the permits being for less than 50 head. The climate, with severe, prolonged winters above 9,000 feet, the narrowness of the valleys of very small streams, and the very few large valley pastures at such park-like places as Rociada, limit acreage usable for cattle

operations. The restrictions of National Forest grazing permits limit summer use of high meadows to what the Forest Service thinks is a prudent load, but the chief limiting factor on land use for grazing is the physical environment, climate and topography, very definitely a natural influence.

One cultural influence other than federal control of summer pastures is the relatively heavy population density of the Hispano villages of the Mountain Zone valleys. Within recent times, it has not been possible for any one rancher to obtain control of enough land to use the land for larger scale operations. The land is divided into many small holdings, many less than 10 acres. The population pressure on the land has time and again been relieved by emigration to other, less crowded sites. For example, many Hispano ranchers and farmers moved from Rociada to Sabinoso in the last quarter of the nineteenth century. The limited land base is well occupied. The higher precipitation of this zone does make for a more intensive use of grazing land than at lower elevations in the county, it is true. But a carrying capacity of twice that of the Plains Zone does not compensate for the small acreage available. The physical environment and the intensive settlement pattern combine to limit cattle ranching to small operations. A third factor may be the lack of accumulated wealth, capital, among most Hispano villagers that prevents possible acquisition of land and of increased breeding stock.

The Mountain Zone operations rely more than do those of the

other zones, on winter supplemental feed, chiefly native wild hay. All the cattle are required to be out of the National Forest by October 15th of a year, and must be kept in the valley pastures until the following May. This further limits the number of cattle that can be raised economically, since only a limited amount of hay can be raised in the small valleys and the valleys can only provide fall and spring pasture for a few cattle. The Mountain Zone is a place where natural limitations on cattle ranching are clearly working.

In this county the traditional way of life of the rural Hispano village is probably most fully preserved in this zone. While all these villages are connected to the outer world by good all-weather roads, while they have electricity and telephone service and are not more than thirty miles from Las Vegas, they have maintained, at least as much as the Pecos Valley villages, the kind of life Leonard and Loomis recorded at El Cerrito a generation ago.[3] The well-watered valleys allow the old traditional economy of small-scale crop raising and small-scale live-stock grazing on the surrounding country far more than do the drier and hotter valleys further east. At least the environment encourages people to attempt staying with the traditional economy. Those Hispanos who are engaged in the commercial cattle industry in this zone live in the villages, which may be strung out as a series of single dwellings along the main road for several hundred yards. They take part in all the village life, and except for perhaps a higher income than the average

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[3]Leonard and Loomis, op. cit.

villager, are much the same as the other people there.

The two Anglo ranchers of the zone live in houses away from the villages, but still within half a mile to a mile, easy walking distance. They are not considered a part of the villages, although they may take part in many of the social affairs and be welcome at these. Both of these ranchers are Catholic, which makes for a lower ethnic barrier. They are still considered outsiders, intruders, and they are reminded of this in sometimes subtle, sometimes not so subtle, open ways.

These valleys have also seen the intrusion of summer camps for out-of-state children, and in the case of one village, the taking over of much of the best valley pasture by a hobby-type Apaloosa horse ranch and summer resort. Although these camps and hobby ranches provide much of the employment and income for villagers, these Hispano people resent the intrusions, and freely blame all their social and economic problems on loss of land to these people. Inter-ethnic relations are probably not as strained here as in other parts of the county, for the economic importance of the intrusions, including the Anglo commercial ranchers, is still appreciated as something partially beneficial. However, further intrusion might cause open hostile reaction from the Hispano population. An incident illustrating this potential was the recent attempt by the horse ranch owner to build a dam on his own land, across a small stream below the village of Rociada. Although he was damming up only his own water, which he held undisputed right to, he was forced

to abandon the project in the face of protests and threats from villagers. He decided the utility of the lake for recreational fishing did not outweigh the bad feelings that carrying out his idea would bring. It could be said with some truth that he was blackmailed into backing down. This form of social control, making Anglo residents feel guilty intruders, is a common and effective Hispano device worked upon the Anglo population in northern New Mexico.

Ranching in the Plateau Zone

The Plateau Zone is the land of Las Vegas Grandes, the formerly rich grasslands of the early nineteenth century. It is also, because of the once excellent grazing conditions, the land of Mexican land grants. Because of both these natural and cultural factors, it was the part of the county with the most conflict between earlier Hispano settlers and later Anglo settlers. It is still considered the best grazing land of the county. Many ranchers say that a calf at the end of the summer will weigh up to forty pounds more here than in the Plains Zone further east. The area is much larger than the Mountain Zone, making no tight limitations on how much land is usable for grazing. There are no National Forest Lands except on a southern extension of the Plateau Zone on Rowe Mesa, and hence no direct governmental restrictions on grazing load. Except for the urban settlement of Las Vegas, there are today no settlements in the Plateau Zone. It is open country, treeless, except for broken areas of small size and usually slightly higher elevation. Rainfall is adequate in a normal year to maintain the grama and other

useful grasses that cover it.

A total of 67 commercial cattlemen use this land for grazing. Although there are many small operations on this land, the dominant size of ranches, in acreage and cattle, is medium scale. Many of the small scale ranchers who use this land are the Pecos valley villagers, who actually live in the Plains Zone. But the dominant dwelling pattern is the separate farm house for both Hispano and Anglo ranchers. These homes are scattered all over the Plateau Zone, located on the grazing land or very near it; near a settlement for Hispanos, but fully isolated for Anglos. This is the only zone where large areas have no public utilities such as electricity or telephone. But most of these homes have electric power generating equipment. They have no radio communications systems, even though sufficient emergencies have arisen in recent years to show the need for rapid communications. Homes are typically larger, better built ranch homes than in the rural villages of the Mountain Zone. This perhaps is to be expected with larger scale of operations and the higher income this normally means.

In the Plateau Zone the most radical deviation from typical cow-calf ranching operations takes place. Here several ranchers have abandoned completely this traditional form of operation, and are pasturing yearling steers brought in from eastern ranches, mainly Texas, for the summer months.

The Plateau Zone, midway in the county from the Mountains to the Plains, is in most respects the area of ranching operations and associated ways of life that were described in the previous chapter as typical modern ranching in the county.

Further, with nearly as many Anglo ranchers as Hispano, this zone has the most opportunities for inter-ethnic relations. Unlike the Mountain Zone, ranchers and other rural dwellers tend to be more closely related to the urban center of the county, Las Vegas, doing their shopping, finding their entertainment, having many of their friends, and hence social life, in this large community. There are many ways in which this zone is different from the Mountain Zone in cultural and social life.

It was on the Las Vegas Land Grant, in the Plateau Zone, it will be remembered, that the most open and violent hostility of Hispano for Anglo was shown, in the Gorros Blancos, the night-riders and fence-cutters of the late 19th and early 20th centuries. Recalling briefly these nativistic activities, not only were Anglo intruders, then usually illegal fence-builders, the victims of these night raids, but so were Hispanos who practiced Anglo-type farming and ranching, particularly use of barb-wire fencing. The Gorros Blancos have stopped riding, but still there is a feeling among Hispanos of country and city alike that this is "their" land and no others should live on it. Even though the county has today about 40% Anglo population, the general feeling of Anglos is "it's like living in a foreign country." Apparently not many Hispanos know or want to know the actual narrowness of their majority. Every opportunity is taken to maintain a front of overwhelming Hispano dominance in matters still controlled by this ethnic group. For example, both major political parties conduct their entire county conventions in Spanish, with brief English translations. This is done even though all

present but a few very old persons are bilingual, probably speaking English better than Spanish. It is interesting to note that actual working political committee meetings, always overwhelmingly Hispano, are conducted in English. Further, many Hispanos will admit that the Spanish of the region is a very inadequate language, the vocabulary small, and English must be resorted to for other than the most commonplace ideas. These people feel inferior when talking to anyone who speaks good Spanish. The Plateau area ranchers all speak English, but Spanish is resorted to by the Hispano in casual conversations with friends and relatives. Many merchants in Las Vegas have said that twenty-five years ago a retail store could not do business if no Spanish was spoken by the clerks. Today one seldom hears Spanish spoken in any stores, and then only as a last resort for something a person cannot comprehend in English. There is much greeting and pleasantry in Spanish, but such seldom goes very much beyond elaborations of "¿Como está?" or comments on the passersby, particularly younger women. English is the language of business, and, as businessmen, all Hispano ranchers speak English very well. The ability to speak good English seems to increase as one moves from areas of maximum Hispano dominance, the Mountain Zone, to those of Anglo dominance, the Plains Zone, or from rural to urban settlement. Spanish as the primary language for public school instruction was outlawed several years ago in New Mexico. This law in itself can be seen as a piece of ethnic hostility, this time Anglo against Hispano. Attempts at founding a genuine biculturism, or people

practicing both ethnic traditions have failed, for there is already a de facto biculturism among the Hispano of the county, with the Anglo resisting changes in his traditional culture, except for such small things as acquiring a taste for Mexican cooking.

Discussion of interethnic relations in some detail is included in this section on the Plateau Zone because it is here that most such relations have been most prolonged and frequent. The Mountain Zone has few Anglos, in ranching or in other categories, and the villagers are insulated against full contact with Anglo people and culture. In the Plains Zone the two ethnic groups, both in ranching and in other activities are more segregated. Again, this may be because there are Hispano villages or clusters of dwellers in the Plains, with the Anglo ranchers only living on isolated ranch homesteads.

Thus, among ranchers inter-ethnic relations are most frequent and most complex in the Plateau Zone. At least one reason for this, as noted before, is the lack of Hispano villages there today, or to any large extent in the past. For reasons not clear at this time such villages were not established on the land grants of the Plateau Zone. One possible reason is the lack of sources of irrigation water with no perennial streams in the zone. The traditional combination of irrigated cropland and upland pasture could not be used successfully as an adaptation to this zone's conditions. The history of Hispano attempts at dry farming were recounted earlier. With virtually no exceptions, this technique

of farming did not succeed and Hispano dry farming settlements are not present today in the Plateau Zone, nor are such Anglo settlements.

The Hispano ranchers of the zone have been on the land two to three generations. The Anglo ranchers are all first generation on this land. Relations are not openly hostile. In fact, there seems to be much casual friendship between Anglo and Hispano ranchers. But it is a fact that "neighboring" on the Plateau Zone seldom, if ever, involves Anglo helping Hispano or Hispano helping Anglo. Such is not the case on the Plains Zone. The Hispano rancher relies most often on his poorer relatives and neighbors, frequently the same people, helping him for some small cash payment. The Anglo rancher seldom pays for help, but may ask his Anglo friends, ranchers or not, even urban dwellers, to come out for a day's work and a good social time to follow with a hearty meal and a general social affair.

The Hispano ranchers of the county, particularly the medium and large scale ones, are among the most assimilated Hispanos in the county. By definition, in a sense, they have to be. That is, they are commercially oriented because they are commercial ranchers. They tend to a greater individualism than the average Hispano, because their whole way of life, centered around their own ranching operations, separates them from whatever Hispano communality there may still be in the rural villages. As businessmen they are as much concerned with efficiency and rationality of operations as other businessmen. Already pointed out is the hostility that

ranchers, Hispano and Anglo, have toward government intervention in the economy, a common business attitude. The only other group of Hispano citizens who can be said to have adopted typical Anglo attitudes and behavior to such a high degree are urban proprietors of larger businesses. The remainder of the Hispano population does indeed still carry much of the traditional attitudes and behavior.

Even though these Hispano ranchers are more fully assimilated into the dominant Anglo culture of the state, they are still part of a separate ethnic group, and apparently desire to remain such. The lack of marriages between the two ethnic groups both perpetuates this separation and is, itself, a result of such separation. There are few interethnic marriages in the entire county. Dating among adolescents is usually restricted, with all concerned affirming this, to one's own ethnic group. The division is ethnic rather than religious, for a large part of the county's Anglo population is Roman Catholic. There have been interethnic marriages in past generations, particularly in the Mexican and Territorial periods, during the 19th century, but these are not frequent today.

Both types of ranchers work with the Soil Conservation Service on area or district boards. Both take part in cost-sharing conservation measures sponsored by the Service. Only among these Hispano ranchers who live in the Pecos valley villages, and who might well be classed as Plains ranchers except for the place of grazing of their cattle, is there reluctance to take part in these measures. As one Soil Conservation Service official put it,

the Pecos Valley Hispano ranchers are unwilling to put up the fifty to seventy-five per cent of total costs that most conservation programs require the land owner to. They are waiting for the State to take over a large part of this owner cost, and then perhaps a new Federal program to take over the remainder of the owner's share. These Pecos valley ranchers show what Mosk said a generation earlier:

> The burden of supplying the deficiency in their subsistence base was taken over by the federal relief agencies, which to some extent were regarded as the traditional "patron" of New Mexico.[4]

Although he was speaking of the relief measures of the Great Depression in the 1930's, these Pecos valley people still look to the Federal government to do for them what they feel a "patron" should do. Even the relatively prosperous cattlemen of the valley still see the Federal Government as their protector, leader, and source of funds for capital improvements.

The other, more clearly Plateau, Hispano ranchers outside the Pecos valley, do not seem to share this sense of dependency on the Federal government. Recent difficult experiences with meeting their share of the costs of conservation measures may eventually lead some of them into a similar expectation, however. Both ranchers and the Soil Conservation Service are concerned about the number of smaller ranchers who enter into shared-cost conservation measures and then become hopelessly in debt when they borrow money from a commercial bank to pay their share of the costs. This is the main point of reluctance of Hispano ranchers of the Plateau

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[4]Mosk, op. cit., p. 49.

Zone in doing more such cooperative conservation work. They know their land needs such work. They are not worried about the Service controlling the number of cattle they can have on land under conservation treatment. They accept such interference with their freedom of action much more willingly than do Anglo Plateau ranchers. They do see that they may lose their land, which they usually put up as loan collateral, if they cannot pay off the debt acquired in soil conservation work. They do not keep accurate books, probably, but they know that they never have much cash income, and that it is possible that they cannot pay off the bank debt. There has been a rash of cancellations of cost-sharing contracts in the past year or two, mostly brought on by a realization, whether founded on actual realities or not, that such a debt may jeopardize their whole operations and their very existence as rural landholders. It is mostly the small ranchers who are thus afraid of getting involved in conservation projects on their own land. The medium scale operators have more capital, and usually are seen by banks as better loan risks, getting better terms on any loans they may want for conservation work. Many of these medium scale operators, both Anglo and Hispano, have cash accumulations that make loans from banks unnecessary, or at least, less threatening.

One factor appears in the Plateau situation, and also in the Plains Zone, that is completely absent from the Mountain Zone. This is the absentee hobby cattle rancher. All these are Anglo, and, as mentioned, are land-hungry and free with cash for both land purchases and cattle operations. This presence, often seen

as a threat, complicates Anglo-Hispano relations. Neither ethnic group likes the intrusion of these hobby operations, although the actual operating personnel of the hobby ranches are seen and accepted as fellow cattlemen. The seemingly lavish and wasteful methods of operation are a source of ridicule of the hobbyist by ranchers. But these people are universally very wealthy, and their wealth brings them respect and even deference from the serious, commercial ranchers as well as other rural dwellers. Perhaps this intrusion of Anglo hobbyists is so new that no common attitudes about these people, no role for them in the scheme of things, has yet been devised by the ordinary ranchers. Ranchers throughout the county dismiss the economic motivations of these hobbyists as "tax-dodging." Even Anglo large scale ranchers who are close friends of these hobbyists freely speak of this tax evasion as the main reason for hobby ranching. Repeatedly it was stated by several ranchers that the Internal Revenue Service has a keen interest in these hobby ranches.

All the innovations these hobbyists attempt in their cattle operations are seen as ways to increase cost of operations and thereby to decrease tax liability. This was seen particularly in the course of the present research when questions were asked ranchers about the use of new techniques in ranching. Very often they dismissed all such changes as things only the hobbyists could afford, and then only because they didn't care about making a profit. The basic conservatism of the traditionally-oriented cattleman was merely reinforced in its resistance to innovations by the rancher's knowledge that the hobbyists were using such new ideas or materials.

Both Plateau and Plains ranchers, particularly medium and large scale operators, share in this scorn of the hobbyist's methods.

One specific new technique, the removal of "weed" trees from the woodland areas on the margins of the Plateau area, particularly the south and east borders, has aroused much controversy. The U. S. Forest Service, not usually seen as a friend of cattlemen, has for many years experimented on Rowe Mesa with removal of what it calls "woody weeds," allowing the grasses to spread out over the land from which juniper has been uprooted. There seems little question but that the land has more grass, more of that one natural resource the cattleman depends upon entirely in the county. There is, it must be added, the problem of having the grass spread fairly rapidly, so that land is not eroded by heavy rains, causing possible permanent loss of all useful cover. Juniper removal cannot be done, except at great risk, on land having an appreciable slope, or on land exposed to strong winds for prolonged periods, a common situation in all New Mexico. But most of the Plateau that is woodland rather than simply grassland is fairly flat, and the new technique might increase available grasses by 50% or more. Several hobbyists have cleared junipers from hundreds of acres, but to date only one commercial rancher in the Plateau Zone has done this. The junipers are worthless as cattle food, but there is great reluctance of ranchers to "tamper with nature."

Ranching in the Plains Zone

The Plains Zone is the largest of the three ecological zones in the county. It is larger than the other two zones combined, and

yet it has only 43 identified commercial cattle ranches in it. What is most evident is the difference in size of ranching operations. While there were no large and practically no medium scale operations in the Mountain Zone, and only two large scale operations in the Plateau Zone, the distribution of sizes of operations is much more even in the Plains Zone. In this zone there are 11 small operations, 16 medium operations, and 9 large operations. Without question the large operations dominate the zone. This would be even more marked if the several very large hobby operations, such as the famous Bell Ranch with 130,855 acres of land and a normal herd size of 3,000 units, were included. There are at least eight such hobby ranches in the Plains Zone, six of which could certainly be classed as large scale operations.

Another peculiarity of the Plains Zone is that a number of cattle ranches, many very large, are only partly in San Miguel County. The T-4 Ranch, with 200,000 acres of land and annual sales of about 2,000 feeder cattle, is also located in two of the neighboring counties, Quay and Guadalupe. It is in one continuous spread, but so situated that it overlaps into the other counties.

Culturally, at least,the eastern half of this zone can be put in the Texas sphere of influence. The people are oriented toward Tucumcari, in Quay County. This county, as the other counties lying south of it on the Texas-New Mexico border, is known in New Mexico as "Little Texas." This is directly noticed in the methods of cattle raising and also in greater acceptance of Texas hobbyists as equals. After observing relations between hobbyists and commercial ranchers, it can be said that the hobbyists are treated

here as close to equals, and at least not openly as intruders.

A further difference in the Plains Zone is the absence of Hispano ranchers from a large part of the zone, the same eastern, "Texas" half. There are many Hispano ranchers in the zone, 27 out of a total of 43 identified commercial ranchers. But they are grouped in two locations of this zone, in the Sanchez-Sabinoso-Clementina area northeast of the Bell Ranch, the old Pablo Montoya Grant, and in the Garita-Variadero area along the middle section of the Conchas River. The one ranch in the eastern part of the Plains Zone that is run entirely by Hispano hands is called an old-time Anglo ranch by the area's Anglo ranchers. Much of this eastern area, almost a sub-zone in itself, is the land that Fabiola Cabeza de Baca wrote of as former sheep herding land of wealthy Hispanos, her "Cuervo country." And many of the present Anglo owners acquired their land from those little merchants along the Rock Island railroad who took over abandoned homesteads from Anglo settlers in the years just before the first World War.

One ecological factor explaining the absence of Hispano settlements or ranchers if the lack of dependable streams for irrigation farming in this eastern subzone. The two areas of Hispano concentration in the zone have within them even today irrigated plots watered by the surface waters ditched to the fields from the Canadian and Conchas rivers. While Land Office records show many Hispano homesteaders tried to dry farm on public domain, away from streambeds, even these farms were located within a short distance of settlements where irrigated fields and Hispano culture were present. All authorities seem to agree that Hispano settlement

tended to follow along streams where irrigation was possible. Further, Anglo homestead settlement in the zone was based mainly on dry farming, not irrigated lands.

In line with greater acceptance of hobby ranchers in this zone is a greater willingness of the commercial ranchers to try new methods, the ones most Plateau ranchers think wasteful, unprofitable, because they see these hobbyists using them. While the large scale Plains ranchers are even more conservative in many ways, such as politics, than the Plateau ranchers, they are much more willing to try innovations in ranching. They appear, particularly in the eastern half of the zone, to be more prosperous and economically secure than the Plateau ranchers, who, it is generally agreed, have the better grasslands.

The settlement pattern in the Plains is very similar to that of the Plateau, with Hispano ranchers tending to be near villages, and Anglo ranchers tending to live on isolated ranches often five miles off a county or state highway. Unlike the Plateau Zone, public utilities, particularly electricity, are available to most of the ranch homes of the Plains Zone. These homes, usually fairly recently built or remodeled, have most of the amenities of urban living, including modern kitchens, well water pumped into the home, washing machines and home freezers.

The terrain of the Plains Zone is rolling country, cut by many arroyos and high mesas. This makes the use of horses on many of the ranches, particularly the larger ones having a variety of topography to be contended with, more necessary than in the Plateau Zone. Here, this need for horses has developed into a horse hobby,

similar to what Bennett mentions in his Saskatchewan study.[5] A rancher may be as proud of the quality of his horse stock as his commercial and purebred cattle stock. From this pride in horses and horsemanship has developed, as nowhere else in the county, participation by both adults and children in horse shows and rodeos. There is little enthusiasm for such events in the remainder of the county, there being not even the usual rural event, a county fair, in San Miguel County. These Plains ranchers participate very actively in fairs of surrounding counties, making them even further removed from relations with the western half of the county, centered around Las Vegas. This orientation eastward to surrounding counties and towns, and to Texas is far more evident in the Anglo than the Hispano segments of the Plains Zone population.

Unlike the other zones of the county, with their many villages of marginal and imporverished Hispanos, practically all the population of the Plains Zone is involved in cattle ranching, either on a commercial ranch or one of the hobby ranches. The chief exception to this is the population at Conchas Dam, located in the middle of the zone. There live the Corps of Engineers employees who maintain and operate this large dam, together with their families and a few people who run concessions in the State Park located on the lake behind the dam.

The total population of the whole zone is scarcely more than three or four hundred. Children attend elementary school either at

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[5]John W. Bennett, A Classification of Habitats, Economies, and Cultures, Memorandum No. 4, Saskatchewan Cultural Ecology Research Seminar, Washington University, March 1964, p. 4.

Trementina or Conchas Dam, both under the Town of Las Vegas School District. Secondary education is provided at Tucumcari in Quay County. The main reason for this seemingly ridiculous extension of a Las Vegas district so far eastward is political and economic. The Town's district was very low in evaluation and bonding base until a redistricting three years ago. In order to increase the evaluation base of the district and to allow consolidation of the county's schools to proceed without opposition from the Town, the county was gerrymandered to include the rich ranching area of the Plains Zone in the Town's district. The City of Las Vegas schools, a separate district and municipality, got the rest of the county, as far east and south as Trujillo and the Canadian river, essentially all the Plateau Zone. Ranchers in the Plains Zone wanted to be taken into the Tucumcari district, but the political decision, after a court fight, was that all this valuable property should stay with the Town. This quarrel about schools has further antagonized the Anglo ranchers of the Plains Zone toward what they consider to be the corrupt and radical Hispano politicians of the Town of Las Vegas. The issue was finally decided in the State Department of Education in Santa Fe, where the 6,000 people of the Town apparently carry more weight than the few hundred people of the Plains Zone.

Not only do the ranchers of the Plains Zone take a more active part in such recreational and hobby events as horse shows and county fairs, they also are active in cattleman's and breeder's associations, using these groups not only for economic and political purposes, but also as bases for their social life. This is particularly true of

the Anglo ranchers, who have few social ties with one another besides these associations. Only in this zone do the ranchers take an active part in such associations. The Hispano ranchers, living in or near villages as they do, have community and kinship relations taking in the Hispano population.

As an example of the importance of such associations, observations were made of a Hereford Ranch tour conducted by the New Mexico Hereford Association in eastern San Miguel County in the summer of 1965. A caravan of 102 cars, led by a State Police car with flashing red roof light, drove over a hundred miles through 12 large ranches in one day. Each car had three or four occupants, so that a total of nearly four hundred people were in this tour. The official purpose of the tour was to have the participating ranchers exhibit on the home range some of their commercial and purebred Hereford cattle to other ranchers, visiting prospective buyers, and the general public. But to this observer the main importance of the day appeared to be the social life occasioned by a mid-morning coffee break at one ranch, a long lunch at Conchas Dam, and a final hour long break at another ranch, a hobby operation. The group was predominantly Anglo ranchers, many from outside the county and state. All the men were dressed in jeans, boots, wide-brimmed hats, and "western shirts." Most of the women wore a similar costume, without the hat. A scattering of women wore fashionable dresses. A more obvious few women wore exaggerated versions of "women's western wear," usually seen on circus performers, and certainly not elsewhere in the county.

Children, young and older, were with their parents or grandparents. It was obvious that the tour was as much a social as an occupational gathering of people with one common interest, the cattle business. Warm greetings were exchanged between people who had not met for several months or longer. News and gossip was exchanged, with cattle or grass seldom mentioned. The tone of the whole event was that here was a group of professional and unabashed cattlemen, a reunion of an economic "clan," with all that this implies. The unifying symbol was the Hereford, probably a purebred bull. Many of these same people had met at last year's State Fair, and probably at the annual meeting of the New Mexico Cattle Growers Association in mid-autumn of the previous year. The president of the American Hereford Association, a Mora County operator, was present, as were the state association's officers. The children played together, the adolescents grouped up. All that was missing from the group to make it comparable to a Pueblo Indian fiesta, aside from the religious ceremonies, was young couples wandering off together. Under the watchful eyes of parents, this was not done, but high school and college-age young people did meet and talk, and probably the mate-selection process was underway for some of these. It was a happy reunion time, not a conference of businessmen, at least according to surface observations. The day was ended with a "western" dance at the Tucumcari Youth Center, where perhaps the young might have a better chance to get together without parental supervision.

Only four commercial ranchers from San Miguel County took part

in this Tour. They are all among the large scale Anglo ranchers. Equal attention was given the herds of hobby ranchers on the tour. Part of the reason for this acceptance of hobbyists was that the hobby ranch managers, but not the absentee owners, were participating in the tour. These managers are acknowledged to be excellent cattlemen, with earnings and social status comparable to those of the large scale commercial ranchers.

In comparing this with the life of the Plateau ranchers, it is beyond the limits of one's imagination to think of the typical Anglo Plateau rancher becoming so involved in such a social life. No doubt some would have fitted into the group well, but this tour group did not appear to be the same kind of people as found elsewhere in the county. The isolation of Plains Anglo large scale ranch life seems to call for such occasional breaking away from a solitary existence. Plateau and Mountain Zone ranchers are far less isolated and do not share the urge to take part in this type of social activity. Settlement pattern alone does not explain this activity, however, and other factors must be involved also. One of these is the presence, or more correctly, the practice, of what may be called Texas Plains ranching culture among the ranchers of the eastern half of the zone. This culture may have been present further west in the county in the past, but it has continued or exists in this eastern section partly because there is continual contact with practitioners of this culture on a day-to-day basis, because of the proximity of the area to the Texas Panhandle and "Little Texas."

In terms of the classic, Wisslerian concept of culture

areas, the Plains Zone of San Miguel County is a transitional zone, with nearly pure Texas-type or High Plains ranching culture in the eastern part, and more typical San Miguel or north-central New Mexico ranching culture in the western part. There is no clear-cut border line, but a diffuse zone of transition from one type to the other. Probably a study comparing the ranchers called Texas type in this county with the purer form found in the Amarillo-Lubbock area of the Texas South Plains would show that the San Miguel "Texas" ranchers were not the pure form, but had many of the characteristics of typical San Miguel, New Mexico ranchers. At best, with the data now available, an hypothesis can be put forward, that the culture of ranchers in the county, at least the Anglo ranchers, changes from a distinct local or New Mexico type to the Texas or Southern Plains type as the location of ranching operations approaches Texas. The eastern tier of New Mexico counties are essentially Texan in their culture, so that one should find the purest form of this Texas ranching culture in the state in these counties, one of which, Quay, is adjacent to the county of this study.

As for the technical aspects of ranching in this zone, again there is variation, with the eastern part having far more variety and experimentation than the western part. In the west the operations are mainly traditional cow-calf ones, relying on year-round grazing on natural grasses. In the eastern part, many of the cattlemen are heavily involved in production of purebred Hereford stock for sale to commercial ranchers for herd upgrading and improvement. Both bulls and cows or heifers are bred and sold for this purpose. In

addition, many ranchers use their land for summer grazing of yearling steers from Texas and other states on the Plains. As with the Plateau ranchers who have this type of operation, such summer grazing is done with cattle belonging to personal acquaintances. But unlike the yearling operations in the Plateau Zone, such grazing is usually combined with other cattle operations.

Experimentation with supplement feeds is found frequently in the eastern part of the zone. Many ranchers take part in experiments and contests the state agricultural college sponsors from its Tucumcari office. These are mainly barn feeding of bulls and steers solely on special feeds to see which cattle show the most weight gains and best total desirable physical development. A friendly rivalry between ranchers encourages participation in these experiments, and top gainers are much admired. These experiments are just one way in which these eastern ranchers show their zeal for what might well be called "professional" cattle ranching. One does not find among these people any apology for being in the cattle business, any such statement that they are in it because "I'm just too stupid to do anything else." They are aggressively proud of being cattlemen. Their activities in such experiments, as well as their vigorous participation in the several cattle associations show this. They are almost evangelistic in their encouragement of younger men to enter the cattle business through their associations, their encouragement of youth organizations much as the 4-H clubs and the Junior Hereford Association, their close association and identification with "the college," meaning the state A. & M. school at Las

Cruces, and through direct personal assistance to younger men trying to establish a herd and find adequate pasture.

The Plains Zone, in summary,is dominated by large ranching operations. The western part of the zone has ranches and ranchers much like those of the Plateau Zone, with operations of all sizes and ranchers of both ethnic groups. The eastern part is very different, being a western extension of large scale, Anglo-Texan ranching life. When research was begun and ethnic categories were established, it was not felt that there would be a third group. But possibly there is a third group present in the county in ranching, namely, to continue using Spanish terms for all three, the Tejano. The differences in life style of this group, found in the eastern part of the Plains Zone, may be sufficient to warrant a separate designation. At the least, it is a distinct sub-group within the Anglo ethnic group.

Summary of the Relations Between Ecological Zones and Cattle Ranching

The county, because of its elongated shape, extends from the Sangre de Cristo range on the west one hundred and twenty miles to the Southern Plains, virtually to the Texas border, encompassing a variety of physical environments. In ecological and economic terms the most outstanding fact appears to be that there is an inverse relationship between annual precipitation and annual income. The most prosperous cattle ranches are in the eastern, Plains Zone, and the smallest operations, with a bare subsistence income, are in the Mountain Zone, with the operations of the Plateau Zone being mostly modest, medium scale ones, with adequate, but not large incomes.

Strictly in terms of the physical environment, where grass, the main resource of all ranchers of the county, is best, the ranchers are least prosperous and most conservative. And where the grass is most scanty and unreliable, there are the most successful and innovative cattle operators. The explanation of this apparent paradox lies in part in the amount of land available for use by any one operator for grazing. In the Mountain Zone, there is very little land, and it is divided into very small holdings. In the Plains Zone, partly because of very late settlement of the land, large parcels could be accumulated easily and controlled by an individual rancher. The quality of the grass was and is offset by the quantity. In the intermediate zone, the Plateau, a smaller amount of land was available for cattle operations, even though settlement was also late here. In this zone even the large operations are relatively small compared to many of the large operations in the Plains Zone. Apparently extensive control and use of land is a necessity for prosperous ranching in the Southwest, regardless of the quality of the land.

A second important difference among the ecological zones is the decrease in the predominance of Hispano ranchers from the Mountain Zone eastward through the Plateau Zone to the Plains Zone. In absolute numbers, the Hispanos dominate the whole county's ranching operations. But most of these Hispano ranches are small scale operations. These dominate the Mountain Zone nearly completely, and are still the most numerous operations of the Plateau Zone. But in the Plains zone their numbers become unimportant compared to the many medium and large scale operations. These small

Hispano operators are the ranchers whom Knowlton in the County Area Redevelopment Report[6] sees as the ideal size operators, but they are also, as he correctly observed, those who are passing from the scene as they sell out their relatively small land holdings of a few thousand acres, to hobby ranchers. Only occasionally can a commercial rancher afford to meet the price hobbyists have forced land to. The small Hispano rancher, probably once the dominant form of operation in the county, is gradually disappearing from both the Plateau and Plains Zones. In the past his land has gone into larger commercial ranches, through an orderly, and usually legal process of land consolidation. Today his liquidation continues, although most of the land does not add to the land base of commercial ranches. With hobbyists making inroads into the holdings of medium and large scale operators, and this has begun to a limited but accelerating extent, the land base for ranching for any commercial operation has now reached its maximum. Land consolidation for commercial purposes is financially unrealistic. If the hobbyists can tempt medium and large scale operators to sell them land, then the land base available for commercial ranches will decrease. There is very little usable public domain to take up, and only a small amount of state land still purchasable. The State Land Office recently declared a moratorium on sales of State lands.

Consolidation for commercial purposes is prohibitive in the

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[6]Clark Knowlton, editor, "A Preliminary Overall Economic Development Plan for San Miguel County, New Mexico"(Las Vegas, N.M.: San Miguel County Area Development Committee, 1961), p. 25.

face of inflated prices caused by hobbyists' offers. Only in the Mountain Zone, which apparently the hobbyists have not yet noticed or are not attracted to, is there a possibility for consolidation of small holdings into viable larger ranches. But it is merely a possibility, for the Hispano villagers who hold the land usually refuse to sell out. How long such resistance will be maintained is a question. The abandonment of rural villages is still going on in the county, as younger people acquire a standard of living and seek income that rural village life cannot provide. Interethnic hostility slows down the process of selling Hispano family holdings to Anglo ranchers, but already Hispano middlemen have begun buying up holdings and selling them for a handsome profit to Texans and other people for vacation homes. Cattlemen cannot compete with such buyers, and it is likely that the Mountain Zone will cease to have even its small present importance for cattle ranching in another ten to twenty years, let alone have potential for consolidation of small holdings into larger scale cattle operations. Only in the other two zones will commercial cattle ranching remain an important economic activity, and then only if hobbyists do not buy up many more operating ranches. Should such buying come to make hobby ranches of most present commercial operations, it is conceivable that the owner-operators would or could remain as actual operating personnel, salaried employees of absentee owners. Such has already happened on some of the large Plains Zone ranches.

In closing this discussion of ecological zones and ranching, it should be stated that there is remarkable uniformity of physical

conditions within each zone. There are very few differences in climate, vegetation or topography in each zone. The zones are delineated readily because of such zonal homogeneity. It is true that there are parts of the Mountain Zone with higher precipitation and higher elevation, but because of inaccessibility caused by rough terrain, long winters, and Federal restrictions on land use, these areas are of little importance. They are little used and uninhabited. The Plateau Zone has only occasional moderately heavy stands of pinyon pine in isolated locations, and the woodlands of the Canadian Escarpement on the zone's eastern border provide slight variation to the environment. The Plains Zone does have occasional large mesa lands throughout, and these are used as "microhabitats" to a limited extent by the large operators who have these in their extensive holdings. None of these mesas rise more than a few hundred feet from the Plains floor, however, and do not represent any significant variation from the physical environment of the rest of the Plains Zone. Only a few ranchers who are located near the border of the Plains and Plateau Zone can be said to control and utilize lands that give the rancher a choice of habitats having significantly different characteristics. Some, but not all, of these ranchers use the higher Plateau land for summer range and the lower, more sparse but warmer Plains land for winter range. Such interzonal use is not common among ranchers in the county. Neither is the use of Mountain Zone lands for summer pasture and Plateau or Plains land for winter pasture. This practice is common in other parts of the Mountain West, such as in Colorado or Wyoming, but at least in the part of New Mexico under con-

sideration in this study no ranchers take advantage of zonal differences in this way. Ranching in San Miguel County is, almost without exception, a monozonal operation, making for reasonably clear demarcation of operations by zones.

CHAPTER VII

ECONOMIC ASPECTS OF CATTLE RANCHING

The preceding chapters have given aspects of the physical and social setting for the main subjects of this research, cattle ranchers. The very massiveness, even ponderousness, of the data presented gives a nearly indisputable picture of the non-adaptability for crop production of all the land outside the valleys of perennial streams. Thus, short of a few thousand acres of irrigated farm land, or a very occasional year of heavy, well-distributed summer rains, such as in 1965, ranch-is the mode of agricultural existence most adaptive to the physical environment.

In 1959, the latest year for reliable Census of Agriculture statistics, livestock ranching brought a total sales of $3,441,730 for all products, including live animals and wool and mohair.[1] All farm products sold had a value of $3,736,439 that year.[2] Ranching accounted for 91.4% of all agricultural sales in 1959. Of this large share, sales of 24,661 head of live beef cattle, including calves, was by far the largest part, $3,279,105 or 87.7% of all agricultural sales.[3] There is no question that cattle ranching is the dominant form of agriculture in the county, both in economic return and in land utilization. Sales of other animals in 1959 was only

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[1] U. S. Bureau of the Census. U.S. Census of Agriculture: 1959. op. cit., p. 144.

[2] Ibid., p. 132.

[3] Ibid., p. 144.

$162,625, with sales divided as follows:[4]

sheep and lambs	9,931 head	$119,172
horses and mules	138	14,465
hogs and pigs	704	21,120
goats and kids	232	7,868

Sales of livestock products were also very small in 1959, and probably are even lower at the time of this study, 1964-1965. One reason for this is the closing of all but two dairy farms since 1959 with new regulations for storage and processing of milk for market practically wiping out the milk industry in the county in the past decade. There were 925 milk cows in 1959, only 594 on commercial farms.[5] Total dairy products sales that year were $69,466 from 16 farms, a decline from 1954 sales of $274,453 from 35 dairy farms.[6] Wool and mohair sales, from respectively 104,983 and 1,089 pounds, were a total of $40,809 from 11,096 sheep and lambs clipped and 204 goats and kids.[7] Far and away the mainstay of the agricultural economy of the county is from sales of live beef cattle and calves.

With only 9,405 acres of harvested cropland on 429 farms, 6,180 of these acres in irrigated land on 256 farms, and very small amounts of fallow land or land neither cultivated nor pastured, the huge bulk of land used for any agricultural purpose, 2,135,512 acres or 70.3% of the county's area, was grazing land in 1959. Only a small amount of the grazing land was used to pasture livestock other than beef cattle, with 50,924 beef cattle and calves on the

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[4] Ibid., p. 144.

[5] Ibid., pp. 128, 141.

[6] Ibid., p. 146.

[7] Ibid., pp. 144, 148.

land in the fall of 1959, 13,485 sheep and lambs, 2,792 horses and mules, 828 hogs and pigs, and 1,612 goats and kids.[8] There were only nine sheep ranches reporting 300 or more sheep and lambs.[9]

That there are other economic activities in the county, based on sales and service, the latter both non-governmental and governmental, is a fact of economic life in the county. Table VII shows income from these activities.

Of particular interest in this table is the large amount of income from government sources, either in direct wages or in what are called transfer payments. Including small amounts of federal, county, and city agency wages, the total government payroll in the county is over $9,000,000 a year, nearly half the total personal income of the county. The state mental hospital, a state college and many state regional offices, together with public schools for the large number of children, employ many people. Over $1,500,000 of the transfer payments are direct welfare benefits. Thus outside state and federal funds, tax-derived monies, account for almost half the personal income of the county. That these non-agricultural sources account for far more income than all ranching and farming combined is another fact of life, directly relevant in an ecological sense, in successful adaptation of ranchers to the physical environment.

Given the more than 3,000,000 acres in the county, it is an interesting fact that today something on the order of 100 families

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[8] Ibid., p. 141.

[9] Ibid.

Table VII - Major Sources of Personal Income, San Miguel County
1962 (latest available statistics*)

Source of Income	Amount	Per Cent of Total
Total personal income	$21,286,000	100.00
All wages and salaries	12,072,000	56.7
Proprietor income	3,129,000	14.7
Transfer payments (Social security, welfare payments, unemployment compansation)	3,980,000	18.7
Public schools and colleges	2,735,000	12.9
Property income	2,169,000	10.2
State agencies	2,068,000	9.72
Trade	2,037,000	9.58
Proprietor income, business and professional	1,709,000	8.02
Agriculture	1,805,000	8.48
wages	385,000	1.81
proprietor income	1,420,000	6.66
Transport and utilities	1,702,000	7.98
Services and miscellaneous	1,490,000	6.99

*R. L. Edgel and P. J. Lalonde, Income and Employment in New Mexico, 1960-1962, New Mexico Studies in Business and Economics, No. 14, Bureau of Business Research, University of New Mexico, Albuquerque.

earn their living from cattle ranching. In the past, as the chapter on earlier land uses showed, there were at one time or another literally thousands of families seeking to establish themselves as agriculturists in the present area of the county. As of the 1959 Census of Agriculture there were 732 farms and ranches, of which 302 were classed as livestock operations. Only 372 of all agricultural operations were classed as commercial, and only 164 of these had sales of $2,500 or more in all products in 1959.[10]

Typical Ranching Operations in the County

Evidence from informants and extensive observation shows that the dominant form of cattle ranching is the traditional High Plains year-round grazing of Hereford type cows and a few bulls on natural grasses, with sales of calves in early autumn. This mode of operation, called cow-calf, has been the usual one, for this area since commercial cattle production began after the Civil War. It is the kind of ranching that was practiced all over the western Great Plains in the late nineteenth century on the open range with less refined breeds. Accounts such as Atherton[11] or an 1880 description of typical cattle operations in the counties of northeastern New Mexico in the Federal Census reports of that year[12] could be used today with only the addition of limited pasture in fenced enclosures, resulting in more

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[10] Ibid., pp. 129,132.

[11] Atherton, op. cit.

[12] Tenth Census of the United States, 1880. Report on the Production of Agriculture. Monograph on Production of Meat, Supplement to Enumeration of Livestock on Farms in 1880. New Mexico Territory. pp. 32-40.

localized operations, and the use of Hereford-type stock. One of the problems that has come with seventy or more years of continuous use of the range for cattle grazing year round and apparent decreased general precipitation, has been the deterioration of the range land. But the 1880 Census description mentions that even as of that early date the range had deteriorated from the few years of its use as open range. Although fencing was illegal on both public domain and land grants, this government report commended the improvement in range lands that such fencing seemed to bring.

A few cattlemen have shifted from the typical cow-calf operation to summertime grazing of imported yearling steers only. Many others are considering changing to this type of operation. The idea of winters without worry or work appeals to them. But the traditional practice is the dominant one for cattlemen of both ethnic groups. There is not even very much concern with pasture management, with winter and summer pastures, or control of grazing by shifting of water sources, salt blocks, and supplementary feed troughs. The technology is kept simple, with modern improvements and innovations mostly limited to the "hobby" operations. As one weary federal official put it, they send their sons off to college to learn the latest and best techniques of livestock management, and the sons come back home full of ideas of what their professors have taught them, then keep on doing things just the way their fathers and grandfathers have always done them. There is a conservatism about most ranchers in the county that makes it very difficult for them to change their ways of ranching. The old ways seemed to work all right, so why

change, even in the face of a changing physical environment, not the least part of which are the depletion of grass and erosion of the land itself.

Some traditional ranchers do not consider the summering of yearlings to be ranching at all, just "renting out your pasture for someone else to graze his cattle on." But more and more ranchers feel that the grass of the area cannot support a gestating cow one season and a lactating cow and her calf the next, that the range is best, most directly, and most profitably used as summer pasture only for yearling steers that a rancher is himself taking no market risks on. As one Plateau rancher put it,

> I made $15 a head on summering yearlings, and the owner lost $18 a head when he marketed them.

The risk is taken out of ranching, the worries and work of caring for cows and bulls over the winter is gone, and a man can today make more money on his land investment. It may be cattleman's heresy, but the converts are increasing on the Plateau and Plains Zones. Interestingly, there are very few ranchers who combine both types of ranching, except that in some cow-calf operations a few calves may be carried over a year.

All these converts are Anglo ranchers. No Hispano rancher has yet made the change. Part of the reason for the ethnic difference may be that many of the Anglo ranchers have long-time connections with cattle raisers in Texas and other Plains regions, from the old home areas of many local ranchers. Some have lifelong friends as regular customers for summer grazing. The few Hispano ranchers who have such Texas friends are themselves doing well enough, are prosperous, and have no economic motive to change at this time to

what all agree is an easier life. Apparently summer yearlings are so much easier a life that many ranchers feel it really isn't ranching at all. The conservatism of many ranchers prevents their changing to a new way of doing things.

There are few cattle operations in the county other than cow-calf and summer grazing of yearling steers. There are no local feed lots located within the county, and only very small sales lots, really small collecting and shipping centers. Most of the cattle are sold to buyers outside the county or state who then ship the cattle directly from the range either to feedlots in state and outside, or to Midwest pastures for fattening for eventual slaughter. The only possible exception to this generalization is the very small cattle grower, usually Hispano and living in one of the riverine villages or in Las Vegas, who pastures a few head of cattle and keeps the calves through a few winters until they are large enough for home slaughter for domestic food consumption or until he needs cash and sells a few head for local slaughter. But most of these people are by definition outside the scope of this study. Only occasionally does a commercial rancher slaughter a head for his own food. Most of the cattlemen, although beef is their favorite meat, buy their meat in local retail markets.

Financial Aspects of Ranching

Although details of the finances of local ranching were not collected for a large sample of ranches, sufficient information was obtained to state that a parallel study of the finances of

cattle ranching done by Gray and Fowler in southern New Mexico, southern Arizona and southwestern Texas is approximately appropriate as a financial statement of the typical cattle operations of this study.[13] Table VIII contains this statement.

The statement given here shows the change from 1963 to 1964, which Gray and Fowler say were two bad years for the cattlemen. 1964 is universally agreed to have been one of the major disaster years for ranching, mainly because of the abnormally low precipitation during the year, and the low precipitation in previous years. The main difference between the ranchers studied by these authors and the ranchers of San Miguel County is the amount of feed raised on ranches and the amount of money expended for supplementary feeds and grazing fees. Very little feed is raised on any farms or ranches in the county, with only 6,454 tons of all hays harvested in 1959, for example, generally agreed to be a very good year compared to 1964. In fact, 1964 was the worst year for crops, including hay, and general range conditions in the recent history of the county according to all reports. The 1954 figures are more likely to be nearer the 1964 facts, for this also was a drought year, although not as bad a year as 1964. In 1954 only 3,815 tons of all hays were cut in the county. Neither the fair 1959 harvest nor the scant 1954 harvest in hays was enough to feed even a fraction of the cattle of the county. In short, it is not an important

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[13] J. R. Gray and W. Y. Fowler, New Mexico Ranch Costs and Returns in 1964, Riding the Price Drag (Las Cruces: Cooperative Extension Service, New Mexico State University, May, 1965), p. 3.

Table VIII - Representative Southwest Cattle Ranch Income Statement*

	1963	1964
Land in ranch (acres)	11,300	11,560
Livestock on ranch:		
All cattle (head)	236	252
Cows and heifers, two years or over	154	160
Calf crop (percent raised)	81	80
Total ranch capital, January 1	$179,190	$188,200
Land and buildings	139,390	149,410
Machinery and equipment	5,330	5,640
Livestock	32,860	31,000
Feed	1,610	2,150
Income:		
Livestock sales	$12,235	$14,168
Other income	1,185	1,319
Inventory change	1,916	-2,089
GROSS INCOME	$15,336	$13,398
Expenses:		
Feed and grazing fees	$ 2,135	$ 3,990
Livestock expenses	2,283	1,556
Machinery and vehicles	2,689	2,399
Other expenditures	3,303	3,649
Depreciation	- 155	494
GROSS EXPENSE	$10,255	$12,088
NET CATTLE RANCH INCOME	$ 5,081	$ 1,310
CATTLE RANCH PRODUCTION AND PRICE INDEXES (1957-59=100)		
Net production	98	97
Prices received by ranchers	95	78
Prices paid by ranchers	111	110

*J. R. Gray and W. Y. Fowler, New Mexico Ranch Costs and Returns in 1964, Riding the Price Drag (Las Cruces: Cooperative Extension Service, New Mexico State University, May, 1965), p. 3.

asset, or part of ranching capital, in the county.

The amount of money expended in the county on feed supplements, including imported hay, may have been of the magnitude of that reported by Gray and Fowler for their typical ranching operations. This is an unknown quantity, with only a few of the ranchers interviewed admitting that they had to resort to supplemental feeds during the 1964 year. Many sold their cattle, particularly their calves, as soon as the grass gave out, in late summer or early fall. Many also sold part of their basic herds, particularly older cows that would have been culled in a year or two anyhow. They did, then, reduce their capital inventory, just as Gray and Fowler indicate. Perhaps they did also spend something on the order of $4,000 per ranch on feeds and grazing fees. It would not be surprising if they had done this. Of course many of the ranchers having larger acreage were able to shift cattle around, using pastures to hold cattle when they normally left these ranges for seasonal grazing. This, too, represents a decrease of capital. But here was illustrated the optimism so typical of ranchers, hoping the next year would be a better one, which it is, and that the grasses would recover from the extra grazing load. There is, by the way, very little irrigated pasture in the county, about 8,000 acres in 1959, and very little use of reservoirs or ground water for sprinkler irrigation of pasture. The major source of grass moisture is natural precipitation, and cattle grazing thus is heavily limited by precipitation.

In other respects than expenses for feeds and feed inventories,

particularly the latter, the financial statement in Table VIII fits ranching operations in the county fairly well. If one has to classify the scale of operations this statement corresponds to in the county, it is obviously a medium scale of operations, which is the median type operation in the county. Thus a herd of 160 mother cows, with about 250 total head of cattle, grazing on about 11,000 acres fits well the medium scale operation. The acreage may be somewhat high, since most of the grazing land in the county is better watered and has better ground cover than that of the study area of the statement. Figuring grazing load on the basis of total herds, the study shows a load of 46 acres per head, or 72.5 acres per cow. Depending on how one calculates grazing load in the county, this amount is either, in the case of total herds, typical of the county, or in the case of cows, only, low. Value of the land is nearly the same as that of the county, however, being $12.80 per acre for the study area.

Gross income was lower in 1964 than in the previous year, mainly from a decrease in livestock inventory. This was caused by forced sales of livestock as grasses gave out. Although cash income from sales was higher in 1964, this was more than offset by reduction in value of the basic herd. Gross expenses were higher in 1964, mostly because of increased expense of feeds and depreciation of the value of the remaining herd.

Net income was almost nothing in 1964, only $1,310. This is about a quarter of the $5,081 income for 1963, which itself was low for this size operation.

The dependency of southwestern ranchers upon weather and external market conditions was amply demonstrated in what the ranchers of the county universally say was their worst year ever. Most of these men, however, were not in the cattle business at the time of the Dust Bowl of 1934. As Gray and Fowler show in the last section of their income statement, cattle production was about the same in 1964 as in other recent years, with 97% of the 1957-59 average. But prices received were only 78% of the average for those years, and prices paid by ranchers were 110% of that recent average. The deterioration of range conditions led, as would be expected, to a need for rapid liquidation of cattle, which in turn brought on a low sales price. Further, there is a tendency to increase production in bad years in the whole southwest, both in crops and livestock, in the hopes of keeping cash income up. In 1963 this was done, but without quite the harmful results of lower per head income and decline in value of remaining herd of 1964. As Gray and Fowler say in their explanation of this income statement:

> Net ranch incomes of cattle ranchers in 1964 dropped again from the 1962 plateau and from the low level in 1963. In fact, if ranchers paid all their bills at places such as feed stores, garages, ranch supply stores and the bank, the chances were good that they couldn't pay their bills at the grocery store. Little income was available for the ranch family in 1964.[14]

Indeed, in San Miguel County, many ranchers had to borrow money in large amounts, either from private banks or from federal agencies, in order to feed themselves and stay in business. That

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[14]Gray and Fowler, op. cit., p.2.

1965 promises to be a better year means that the ranchers can repay most of their debts, replenish their herds, and generally be in fair condition, but in no way be suddenly well-off. Gray and Fowler reflect the perpetual optimism of the rancher in their closing statement:

> Weather prospects, fewer imports, fewer livestock at home and a continuing increase in the demand for meat brightens (sic) the picture this spring. Things are about ready to start getting better. The management skills used in the tight years just past should not be forgotten. Instead they should be used to advantage now. Make sure the basic breeding herd is high producing, young and that your financial statement is sound. Continue to concern yourself about what happens beyond the ranch fence. This year won't break or make many ranchers. It will be a time for reflection and calm, collected thinking about the alternatives that face the individual.[15]

One can hardly accuse this concluding section of the report of being unsympathetic with ranching interests and thinking. It is, as might be expected of an Extensive Service publication, partisan and concerned for the welfare of the rancher. The classic statement of optimism, highly qualified optimism though it be, is the second sentence, "Things are about ready to start getting better." One wonders what secrets the experts at the Extension Service have of the ways of the weather. Will 1966 also see high precipitation? So far as has been shown in this research, the precipitation is very erratic in the whole southwest, and certainly in San Miguel County, long considered excellent cattle country. But it is generally assumed that with the heavy and well-distributed summer rains of 1965, a series of rainy and prosperous years is under way.

What is equally interesting in discussing typical regional ranching operations is the paternalistic urging of the Extension

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[15] Ibid., p. 10.

not to let up on the improved ranching and range management,and political action, that have tided most ranchers over the bad period since 1962. One can readily infer from this cautionary statement that ranchers tend to get careless and forget about the world "beyond the ranch fence" in good years. In ecological terms, when the pressure of the physical environment is off the rancher, perhaps he relaxes his struggle with the environment, and is not prepared to contend with the proverbial if somewhat contradictory "rainy day." These writers see a good year as a respite from the struggle with the environment, a time for deciding what to do next. A question might be put, have the ranchers learned anything in an ecological sense from the years of marginality. In the county studied here, at least, these people are conservative, slow to change. Given the few changes in methods of operation, both technical and social, that have taken place over a period of thirty to fifty years, one must not expect many changes in the near future. Perhaps there will be more and more ranchers shifting to pasturing of yearling steers. But even this is not encouraged, or perhaps the trend is not even realized, by the Extension Service, as witness the assumption by Gray and Fowler that cow-calf operations are the normal, proper form for the southwest. The imaginative and even daring experiments of hobby ranchers with new technology in feeding, and ranch improvement and management are treated with doubt and even ridicule by the typical rancher of the county. He sticks by the tried and true, in spite of near disaster. He curses the weather,

the Texas hobby ranchers, the meat packers, the banks, the Federal government, and the general public, but he seldom steps back, as Gray and Fowler urge him to in days of relative prosperity, to see just what he's doing and how he could change for the better. He likes ranching, and he likes it the way he has been doing in good and poor years alike. And, as mentioned before, he's not eager to start keeping accurate books that might belie the apparent economic worth of his efforts. He is fairly certain what he should do to be successful, and he thinks he is successful if he does those things. Failure of his neighbors, selling out to the always tempting Texas hobbyists' offers, don't impress the typical rancher with any environmental imperatives. The occasional good year is seen as sufficient justification for continuing traditional practices, and the bad years are discounted as bad luck, something to be expected in poker and cattle raising once in a while. Small wonder the Extension Service tries a little cautious and diplomatic chiding of the conservative, tradition-oriented cattlemen after an ecological lesson that should have been self-evident. The myths and beliefs of the cattleman insulate him from environmental reality, making environmental determinism seem less a fact than it really is.

Technical Aspects of Ranching

The typical operation, as mentioned earlier, is a cow-calf one, using Hereford commercial, but not pure-bred, stock. Most of the calves are marketed in the fall of the year. Grass and market conditions to some extent determine how early in the fall calves and a

few older cows are marketed. It also determines how many heifer calves are kept over the winter for eventual use as breeding herd replacement or enlargement. Many of the medium scale ranchers do not attempt to raise their own breeding cows but purchase the culls from purebred operations, mostly from the Mora valley just north of the county. In this location are several purebred Hereford ranchers, including the current president of the American Hereford Association.

Bulls are usually purchased rather than bred on the home range. They are usually a better quality Hereford stock than the cow herd. In the cow-calf operations about 3 to 5 such bulls are kept on the range per hundred mother cows. Many ranchers sell their bulls every three or four years, fearing the bad effects of bulls breeding with their own daughter cows. There are very few attempts to introduce purebred cows onto the range. The ranchers rely on upbreeding of their stock by imported bulls. One gets the impression that second and third generation Hispano ranchers started out with poor stock thirty to fifty years ago, and only gradually have come to have herds that are predominantly Hereford in character. There are only two or three ranchers who are trying to raise purebred Angus cattle. They are looked on as radicals, although not without some admiration, by the majority of ranchers. "Those black cows" is the term usually used for such herds.

The days of massive cattle drives from range to shipping point are over, with most of the ranchers selling directly to eastern buyers, who truck the cattle directly from the seller's range to their destination.

One consequence of direct trucking, also used for bringing stock onto the range, is lack of use of railroads for shipping cattle. The historic antagonism of ranchers to the railroads was not found among ranchers of the county today. With probing, some negative attitudes toward railroads were found. But they had to do with the inconvenience shipping stock by rail brought, not the old ideas of economic dominance by the railroads. The railroads were said to be unreliable, not having stock cars at the right location at the right time, making the cattleman wait sometimes two days for cars promised for the morning of the first day. With universal fencing of range land, it is not possible any longer to move cattle any distance on the hoof across country to railroad pens or to distant pastures or sales lots. The general feeling is that since you have to put the cattle into trucks to get them to the railroad pens, you might as well ship them all the way by truck. In addition to this, there is a general dislike for the chores involved in handling cattle for shipment. Let the buyer do all that, even at some loss in purchase price to the seller. One reason for reluctance to put cattle in trucks or onto railroad cars is the lack of personnel for the task. Here "neighboring" does not apparently work. Temporary ranch help is scarce in the county, is unreliable, and costs too much, according to several informants.

Little use is made by ranchers outside the Mountain Zone of summer grazing of cattle in the Santa Fe National Forest. Again the problem of transporting cattle seems an obstacle. Those few ranchers who control land both in the Plateau and Plains Zones may use the lower land for winter range and the higher, Plateau Zone land for

summer range. Not all with such land do this, however. A few of these ranchers, particularly small ranchers of the Hispano villages along the Pecos, may utilize the eastern extension of the National Forest land on Rowe Mesa for summer range, but these do so only because the land is adjacent to their own pastures down in the Pecos Valley.

In an earlier chapter were mentioned relations of ranchers with the Soil Conservation Service, and the ranchers' participation in soil and water conservation measures. Other governmental agencies are seldom encountered or used. Aside from the County Agricultural Extension Agent, who is at best peripheral to ranching operations, being used only for feeble attempts at control of range "weeds," such as cholla cactus, mesquite brush, and occasionally junipers, there are few agencies utilized in ranching operation. The National Forest Service, of course, is dealt with by ranchers having or seeking grazing permits, but these are a small minority of the ranchers. The Agricultural Stabilization and Conservation Service is looked upon favorably by most ranchers, but little specific is done by this group. The State Land Office is used by many of the Plains ranchers who rent pasture acreage from that agency. Some ranchers control half their grazing lands through such leases. Rents are reasonable, and interference with individual ranching practices is seen as being minimal, and hence, satisfactory. No complaints were heard about this state agency, although many ranchers dislike the outside control the Forest Service exercises through its grazing permits. This attitude is part of the "official" complaint of the New Mexico Cattle Growers

Association, and readers of that group's journal repeat this complaint, even though most of the ranchers have had no experience with the Forest Service.

CHAPTER VIII

SOCIAL ASPECTS OF RANCHING

Housing and Settlement Patterns

In terms of residence, three types of ranching life are found in the county, isolated rural, urban, and village rural. Most common, typical, is the isolated ranch home located out on the range land, usually near a county or state road. These houses are usually very much in the typical Anglo-American pattern with separate rooms for specific functions such as eating, sleeping, cooking, and entertaining visitors. Seldom, except among some small scale operators, is the home just one or two connecting rooms without doors between each room, multiple in function. There are usually separate bedrooms for parents and children, although several children may share a bedroom. Furnishings are in good condition, although there is little attempt at "keeping up with the Joneses," having the newest and best one's income or credit will allow. Modest rooms and furnishings are the rule. One cannot say that these homes are less modern than the average middle class home in Las Vegas.

Since winters are mild in all but the higher mountain valleys, these isolated ranch homes are usually accessible all year. Only one or two times a year does a snowfall of more than two or three inches occur. Drifting snow is more a livestock than a transportation problem. Most ranch homes are not isolated from the outside world by the occasional heavy thundershowers of mid-summer either, since they are usually located up out of the arroyos and river valleys,

with well-drained, if not well-maintained graded roads connecting to the few paved highways of the county.

However, there has been a movement in the past decade, presumably brought on by better roads, demands of wives for more contact with urban friends, and the superior comforts of the city, to move one's residence into Las Vegas. The second type of residence is urban living, commuting to one's pastures. Probably not over half a dozen commercial ranchers are urban dwellers, however.

The third dwelling pattern is related to the second, involving living, not in the city but in or very near the small villages or remnants of villagers, among non-ranchers. Not only housing, but social relations are atypical for ranching for the village-dwelling ranchers. Practically all of these village cattlemen are Hispano, small and medium scale operators.

The typical pattern of dwelling, for all ranges of operation, large, medium, or small, is the isolated but adequately furnished ranch home of a nuclear family. Very few ranchers, other than the large operators, have hired hands living alone or with their own families on the property of the ranchers. In fact, very few have paid help at all. The home ranch is usually the only inhabited building on the whole property.

Other amenities of urban life, in addition to modern housing, lights, gas heat and refrigeration are not absent. Television is found in most homes, even those away from the electric lines. The only people who seem not to have television are those who live where reception is impossible, as in Sabinoso, in the canyon of the

Canadian River. Even there they talk of putting up an antenna on top of the canyon rim and connecting sets to it. On the smaller ranches outside plumbing, both for eliminatory processes, outhouses, and personal and clothes washing is still common. But on the medium and large ranches, interior plumbing is the rule, including washing machines, flush toilets, showers or bath tubs, and even dishwashing machines and clothes dryers in some. Outhouses are still present at many ranches, just in case the septic tank gets out of order or the electric well pump freezes up some cold night. The best of both worlds, it might be said, with the nearly foolproof devices of the old life backing up the desired and useful, but not always dependable gadgets of modern urban life.

Transportation

Typically, the rancher has both a pick-up truck, usually fairly new, and a recent model passenger car. The smaller ranchers may have only a pick-up, or they may also have an older car. The big ranchers usually have several pick-ups and a prestigious late model car, such as a Cadillac or a Chrysler Imperial. The pick-up will take you through a muddy road when the car might not. Parts of the old way of life are hung on to, as safety devices. And if the pick-up gets stuck, there are always a few horses around, either to pull the truck out, or to ride away from the now freely cursed vehicle usually relied on for most ranching transportation. The nearly level terrain of most of the ranch land of the county has made reliance on the pick-up truck, with limited slip-differential and a four-speed transmission, nearly entire. But a man wouldn't be

a rancher without a few horses, and they do come in handy in an emergency. The "horse hobby," found by Bennett in Saskatchewan among cattle ranchers, has not become common in San Miguel County.[1] The horses are kept for utility and "just having them around," not for show or rodeo, except among the non-ecological hobby ranchers and a few of the most prosperous large scale ranchers.

Clothing

The popular picture of the cattleman in jeans, high boots, broad-brimmed Stetson, and "western" shirt is only partially true in the county. On the streets of Las Vegas can be seen hundreds of men in such attire. But except for quick trips to town for some emergency, the cattleman seldom is seen in town in these, his working clothes. Most of the "cowboy" types seen in town are not truly cattlemen, but just rural or urban residents, who have generally, among the men, adopted this traditional work uniform for their daily wear.

The cattleman usually wears blue jeans, partly for tradition, harking back to the days when he did his work on horseback, and partly because this is still a practical uniform for outdoor work. Most cattlemen are scornful of the "cowboy" or western shirt, a tight-fitting cotton shirt with fancy snaps instead of buttons, and expensive at that. Most ranchers work in a heavy cotton or wool shirt that can take the strains of working with cattle. A

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[1] Bennett, A Classification of Habitats, Economies, and Cultures, op. cit., p. 4.

few are repelled by the whole uniform and wear ordinary shoes, trousers, and narrow-brim hat or visored cap for working.

The male attire for town is far from the "cowboy suit" of the "man on the street" of Las Vegas. For visits or shopping, the rancher may retain his broad-brimmed hat, although a cleaner, newer one than the one he works in, and probably with a narrower brim. But his trousers are often an expensive gabardine, and his shirt a conservative pattern of Pendleton wool with a matching zipped jacket in winter. He may have expensive boots, well tooled, but more likely he wears ordinary shoes with relief. Many ranchers complain about the discomfort of boots, even for work.

For occasions that call for formal wear, all ranchers have a plain, dark-colored business suit. Not a one seemed to have, or be willing to admit having, a so-called "stockman's suit," usually gabardine narrow trousers and a matching suit coat cut with narrow flared waist and slanted pocket flaps.

Women's clothing is essentially the same as that of urban dwellers and rural non-agricultural people. That is, skirted garments are the usual apparel, with an ethnic division on casual wear. Hispano ranch women are less likely to wear slacks or jeans than are Anglo ranch women. In fact, there is a general tendency, based perhaps on traditional Hispano upper class traits, for women to be restricted from manly garb, recreation, and work far more in modern Hispano culture than in modern Anglo culture.

Children's clothing also is essentially the same as that worn by other children of the county, with income and class more

determining the clothing worn than rural residence or ethnic group. For the boys blue jeans, sturdy shoes or perhaps modified riding boots, a cotton flannel shirt, and in cooler weather a lined denim jacket or quilted dacron or nylon "ski" jacket is the school, play and visiting uniform. Girls under twelve years may wear jeans or skirted garments, with skirts usually predominating. Here again the ethnic difference in feminine garb is seen, with Hispano girls seldom wearing jeans, at least to school or to visit. After the sixth grade in public school, girls are not allowed to wear jeans or slacks in class. Skirts then become the standard uniform except for leisure, when slacks or shorts may be worn. Adult women seldom wear shorts among ranchers. Men never, in either ranching or the urban population, wear shorts. Occasionally an adolescent boy will be seen in shorts for recreation, but adult males have not yet accepted such a garment. One should add that the climate is such that "hot weather wear" is not needed very many days of the summer, giving no environmental imperative for wearing as little clothing as possible.

Diet and Nutrition

With some monotony, and not unexpectedly, ranchers consider beef their favorite food. Most prefer this food well roasted, brown all the way through, the traditional choice of the cattleman. This meat and dried beans in one form or another, are common and desired foods of all ranchers. The Hispano is a bit fonder of chile, green or red, with his heavy meals, but all are given to liking food well spiced with chiles. It is not without reason that

beans and chile with some sly humor were recently declared the state vegetables by the 1965 session of the state legislature.

Mutton and lamb, although the traditional meats of Hispano people of the state and county, are not at all popular with cattle ranchers. Occasionally an older Hispano rancher keeps a few head of sheep around for home slaughter. But most ranchers are very scornful of sheep, and also of mutton and lamb. This is not a matter of ethnic preference, although the degree of repugnance at the thought of eating mutton among Hispano ranchers may be a good indication of the degree of non-practice or non-identification with the traditions of Hispano life.

Cabrita, roasted young kid, is still a favorite springtime dish, at Eastertime, of the Hispano rancher, but the Anglo ranchers seldom even know what this food is.

Time and composition of meals is universally the same among rural-dwelling ranchers, and even among most of the urban ranchers. Breakfast is eaten before work is started, and is a relatively light meal, with coffee, hot or cold cereal, or perhaps modest helpings of bacon and eggs. Usually the rancher returns to his home for the noon meal, which is the one hearty meal of the day. Only during the occasional round-up or branding is noon meal skipped or eaten as a light lunch on the range. The only unusual cases here are ranchers whose wives work as school teachers and thus are away all day at the village school. These men wait until evening for their main meal of the day, much like the typical urban American.

This noon meal is a heavy and hot one, with one or more kinds

of meat, potatoes, beans, perhaps chile in some form, a salad, and sweet desserts. The evening meal is often the left-overs from the noon meal, with cold cereal commonly supplementing these, if anyone is hungry. Coffee is drunk at both these meals, with very little fresh milk served, even for children. Some ranchers do keep one or two milk cows on the ranch, especially if they have small children, however.

Very little of the food eaten at a ranch is grown there. Vegetable gardens are not common, although many ranchers keep a few chickens and hens to provide eggs and occasional stewed chicken. Most of the food consumed on a farm is brought in a store, either the big "supermarkets" of Las Vegas, or, in the far eastern section, Tucumcari, or in stores in nearby villages. This includes most of the beef consumed at home. Seldom is range beef slaughtered for home use, but "choice" grade cuts are purchased in an urban super market. Then they have meat that has been through the full cycle, bred and grown in the west, fattened on Midwest corn or wheat, and shipped back slaughtered and dressed for sale in retail stores. One rancher did say that he usually killed a few cows, but always ground all the meat into hamburger and put it into his deep freezer. When asked why he did this, he made it very clear he didn't consider range beef fit for human consumption in any other form than ground. Some ranchers reminisce fondly about the old days when you killed a head and hung the carcass in the cool of the shade, cutting off what you needed from day to day, but most of these people now drive to Las Vegas and buy their steaks and roasts at Safeway, shopping weekly just as do the other inhabitants of the area. A few also

speak wistfully about the days when a cow was killed and cut up into thin strips, which were dried on a clothes line and thus made into jerky. But little jerky is produced today. For one thing, nearly every ranch now has electricity, and with this, electric refrigeration. Only a few ranches are outside the network of rural electric lines, and most of these have some form of mechanical refrigeration, either bottled gas or home-generated electricity as the energy source. Perhaps a generation ago home life was without the amenities of urban life, but in 1965 no ranch was found that could be called "pioneer" or primitive in its general mode of domestic life. All the material comforts of city life are found, even ten to twenty miles from an electric line or a paved highway.

For festive occasions, beef is still the predominant food, with chickens and salads often used more than in day-to-day, ordinary meals. There is more a change in quantity of foods available than a change in kinds of food. There may be more variety in ways meats and vegetables are prepared, but the same basic diet is there, beef, chicken, beans, potatoes, chile, and, for the more traditional feasts of the Hispano ranchers, mutton.

Frying is the most common method of cooking. Steaks are fried rather than broiled, even by people with the most modern gas or electric ranges. In frying, of course, much cooking oil and lard are used. Roasting, or cooking in an oven, either a modern range oven, or, very seldom, the old Hispano outdoor oven, the "horno," is the method of cooking breads, and sometimes large cuts of beef. Most cooking is uncomplicated, with fancy preparations reserved for the festive times when one wishes to show his hospitality.

Shopping in the cities, and to a lesser extent, in the villages, is a social as well as home economics affair. Much visiting is done on the shopping trip, with most of the family coming in with the father and mother, perhaps even staying overnight with friends or relatives. With the Anglo rancher it is more likely friends; the Hispano, relatives. Saturday is the usual shopping day in Las Vegas. Much visiting is done right in front of the Safeway store by the men, and inside the store by the women, Between food shopping in a market and buying ranch supplies in one of the several supply houses in the city, the whole day is easily taken up. Movies are a favorite entertainment of ranchers, and if there is not a big dance going on in town or at one of the outlying villages, the whole family may take in the show. Often, after a day in town, members of the family are scattered all over town visiting different friends and relatives, so that Saturday night or Sunday noon sees a round-up of the ranch family in preparation for the return to their rural home.

It is also common to see a rancher bringing his children into Las Vegas on Sunday afternoon in the family pick-up. They are taken to the movies, and the father may again spend the time he waits for them in visiting and talking. New Mexico has a strict Sunday closing law for bars, so that less heavy drinking in bars goes on that day than on Saturday. One cannot make this an absolute statement, since many bars are open only via the back door on Sundays. This is particularly so in the rural areas, where police and militant temperance forces are virtually nonexistent.

In shopping, in entertainment, in friendships, and possibly

relatives, the ranchers are closely associated with the urban areas of and near the county. This was not the case, of course, before automobiles and trucks were widely distributed, thirty or more years ago. But today a drive of thirty to seventy miles is no obstacle to ranchers who in their own childhood made such trips only a few times a year in a wagon that took several days or a week.

Friendships and Social Life

Visiting and dances are common forms of social interaction outside the nuclear family. When ranchers were asked who their closest friends were, nearly all replied the men and women they were brought up with as children. They may have been the people of one's father's village. Or in the frequent case of a man having lived away from home in an urban area while he was attending a public school, they were his classmates and neighbors in the town or city. Many of these childhood friends have become very close friends, even though many have moved to distant places in and out of state. Since most of the Anglo ranchers are themselves immigrants to the county, their friends are "back home," usually in Texas or other parts of the Southern Plains. Frequent long-distance trips are made back to the old home community, and in the summer many friends from that place visit the cooler environment of northern New Mexico. Hispano ranchers usually have many relatives living in the city and villages of the area, as well as in the urban areas of Colorado, California, Wyoming and other western states, and these are the people usually visited.

Usually the rancher is on friendly terms with his present-day

ranching neighbors. These people, as mentioned before, help one another in times when extra help is needed, in "neighboring." The pattern of who takes part in "neighboring" needs further investigation, for there are no clear-cut lines involving ethnic identity or size of operations. Many more of the Hispano ranchers pay people to help them, but then they often live near or are related to nearby village dwelling people of low income who need work and have some skills in handling cattle. In the neighboring relation it would be considered an insult to offer a neighbor money for helping. It would mean that you did not intend to help him in his needs, and would destroy the mutuality central to "neighboring."

Ranchers usually live in isolated locations, with only the nuclear family as day-to-day companions. But, as we have seen, the circle of acquaintances is wide for nearly all ranchers, with rapid transportation and sufficient, if not well maintained, road systems over all the county.

Family Organization

With a few exceptions all ranches are owned and operated by the male head of a nuclear family, living with his wife and any minor children. In the case of some Hispano ranchers, but not all, a drastic modification of the traditional extended family operates and lives on the ranch. This usually means a father and mother, and two or three of their grown sons, together with the wives and offspring of these sons. The general tendency in these cases is for the daughters and other sons to marry and move off to urban centers.

An interesting aspect of the level of education of commercial cattle ranchers of both ethnic groups is the frequently much higher level of education of the rancher's wife. This is not just a matter of a year or two more of elementary education, but of many years, often the husband having only a fifth or sixth grade level of education and the wife having one or more years of college. Although it is difficult to detect, it does seem that something on the order of Vogt's "mamma-ism" is present in at least these matings, with the adult male, the father:

> . . . calling their wives "mamma" and behaving "like grown-up little boys," especially in situations where they are aggressively striving to assert their masculinity, but not quite carrying it off.[2]

In some situations observed in this study such a struggle of the adult male to play the very masculine role of outdoor cattleman and knowledgeable male was clearly present in the attempts of "poppa" to upstage "mamma" in answering questions put in interviews. Among Hispano as compared to the Anglo families, ranching families, the women seemed more willing to retire from the room when the father-husband became obviously disturbed over competition in giving answers and in holding the attention of the interviewer. Again, an hypothesis comes to mind here, that the traditional patriarchal extended family of Hispano life is modified more and more as members of such families become involved in cattle ranching in a larger, and more commercial scale. No true patriarchal extended families were found in this study among ranchers, although kinship ties are not without importance among the 19 Hispano medium scale operators and some of their less ambitious or less successful cousins

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[2]Vogt, op. cit., pp. 148-149.

and uncles. Kinship is of slight importance to any of the Anglo ranchers, since most of them are first generation immigrants to the county and are the only members of their parental families to move into the area.

An exact census of the number of people residing on each ranch was not made for this research. Given the size of the county and the need for local informants, at least on this particular facet of the research, such data was not seen as important enough to warrant the labor of collecting it. But it is evident from visits to randomly selected ranches around the county that cattle ranching families are relatively small families. Those men who are young enough to still have minor offspring, and these men are a minority, growing smaller each year, usually have two or three children. The tendency is for Hispano families to be on the high side of this range and Anglo on the low. In any case, the families are small, at least compared to the very large families of traditional Hispano culture, where ten or more children were considered a good and proper number. It seems that the lesson of a century, that large families mean small inheritances for children, has finally been realized by the Hispano rancher. Older Hispano ranchers show the old pattern of large families, but with only one or two adult male children having been allowed to remain at home, the rest of the offspring having been urged off the land, and into urban occupations.

Education and Aspirations for Children

Education is highly valued among ranchers. It is seen as a symbol of social status, and as a practical instrument for greater

income for the next generation. With those ranchers whose children have matured to adult status, one can speak of achievement rather than of aspirations of parents for their children. The most obvious matter in real achievement is that most offspring of ranchers have better education than their parents and have moved into other kinds of work, usually urban, white-collar work. A given ranch will support only a few children of a family, and most must, and have known this since early years, move off the ranch. Division of ranches is unrealistic below a minimum of four to five thousand acre parcels. There is an upper limit on how much new land can be acquired, partly because there is little unused land, and partly because local ranchers cannot compete in the acquisition of more land with "hobby" ranchers and their high offers for land.

This limitation is seen as much in aspirations for school-aged children as in actual work of adult offspring. Very few ranchers who have young children expect the children to remain in ranching. Most want the children to obtain a high level of education, with a college degree the usual expectation. Among ranchers with adult offspring, many of the male children have had a college education. Very few of the female children have such. A high school education would be considered a good achievement for a rancher's daughter. Among older Hispano ranchers, even this was considered high, with completion of eighth grade thought of as sufficient for a girl. One has to remember that ten to twenty years ago, when such daughters were in school, being in school often meant boarding in town, separated from one's nuclear family, and some additional expense or obligation to the family. Boys in such families, though, were encouraged to go

through college, especially for vocational training for non-agricultural work.

Today there seems to be real conflict in the minds of ranchers as to what they expect their children to be and do at maturity. Very few really expect a son to follow in the father's vocation of cattleman. Very few sons actually do this, as census figures of the age of agriculturists have shown. The agricultural population of the county is increasingly an older group, with fewer younger operators each year. Yet the rancher does expect his children to maintain ownership of the land. Some ranchers are very clear in their hopes that their children will acquire a high level of education, and will move away into urban areas to practice specific professional vocations. But none of these fathers talked of liquidation of his ranch property on his death or retirement. The hope was nearly always expressed, by Anglo and Hispano alike, that the children would not sell the land, but would keep it and use it for some vaguely specified purpose, such as a summer vacation spot. The attachment of ranchers for their land is not, as was thought early in this research, a thing more found among Hispano than Anglo ranchers. Both have an emotional attachment to their land. Both hope that somehow the family will keep the land when death comes and the estate is settled. The thought of someone else owning and using a man's home and land is frightening to many ranchers. One man expressed it vividly in a fantasy he says he has many times:

> Sometimes I imagine I'm dead, that I died suddenly right now, and I wake up a hundred years later, and there are my children. The land isn't theirs any more. I think this is terrible. I want them to still have this land.

As he related this fantasy, he grew very disturbed, obviously very fearful that all the land he had worked hard to accumulate would pass out of the family. Kinship and proprietorship are closely associated, perhaps somewhat more with Hispano than Anglo rancher families, but there is among all a conflict over long-term land tenure. Most ranchers know they or their heirs may be tempted to sell out, but they don't like to think about it or talk about it.

In speaking of limitations of aspiration for children to take over ranching upon one's retirement or death, the environmental limitation must not be made the only factor. Important as it is that the amount of land is restricted, even decreasingly available for commercial ranching, or that the area is "drying up," making for further decreases in economic potential, there are other factors. One of these is that ranchers are in many ways typical middle class Americans, concerned with occupational and social mobility for their children. These aspirations seldom involve agricultural work of any kind. Although parents will not openly admit it, most of them do not feel there is much promise in agriculture. The younger parents put their children under considerable pressure to get good grades in school, to be ready to go to a good state university, and get professional training for a well-paying business or government job. These parents see whatever financial success they have in ranching as a means of furthering the mobility and economic security of their children. Most ranchers themselves grew up under conditions close to poverty, both Anglo and Hispano having this experience. They have emerged from rural poverty to modest rural affluence, but they seem determined that their children

will not have to cope with the uncertainties of agricultural life. They want their children to have the security of professional training in engineering, nursing, or other useful, practical, and moderately lucrative fields. As one rancher put it,

> I'd like my children to keep the ranch, but I want them to have good jobs, not the hard work like I had to do.

The land is used for social mobility, both for parents, and for children. Yet it is not seen as an expendable, or merchandisable commodity, to be disposed of when it has served its purpose even though most ranchers have acquired most of their acreage by purchases in their own lifetimes. It is generally assumed that the land will be sold when it has served this purpose, but this reality is not anticipated with happiness, or relief, but with fear and grieving.

Religion

Religious affiliation and practice show much more of an ethnic split, so that one can say the typical Anglo rancher is a non-practicing Protestant Christian, and the typical Hispano rancher is a moderately devout Roman Catholic Christian. There are exceptions, mainly for some Protestant Hispano ranchers. A few of these are old-line Presbyterians, second generation in the faith, while others are recent converts to fundamentalist sects active in the area. A large number of the Anglo ranchers are Masons, this apparently taking the place of denominational activity for many of them. When pushed on this matter, some informants denied any importance to Masonic beliefs or values as a substitute for standard Protestant ones, but one still gets the impression there is

such use of Masonry for a "code of life" or practical religion. Western ranching has seen such a lay code in the past, as Atherton in his chapter on cattlemen's religions discussed at some length.[3]

Catholic ranchers seem to attend mass whenever a visiting priest comes to a nearby village. These people are usually strong lay supporters of their church, perhaps more so than the average village or urban dweller. Usually, of course, they have more money to give material support, but the support is more than this, with feeding and entertaining the visiting priest a part of their contribution, too. No investigation was made of the participation of Catholic Hispano ranchers in the Penitente order, which still has active groups in this part of northern New Mexico, particularly in the mountain villages of the county. This is a semi-secret organization, and questions about it would have inhibited whatever rapport had been established with an urban, Anglo, non-Catholic, non-ranching college professor field worker.

Many of the ranchers have lived in Las Vegas at one time or another, and during such urban residence have been very active in local organizations, both religious and secular. The Catholic ranchers have mainly been active in Knights of Columbus, while the Protestant ranchers have often held offices on the lay boards and clubs of their churches.

Public Media and Ranchers

As far as exposure to public media, most ranchers read only the

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[3]Atherton, op. cit., pp. 128-150.

local daily paper, the Las Vegas Daily Optic, usually six to eight pages, with some national news, but mostly local social and police news and much local advertising. It is as conservative as the typical rancher, lifting many of its editorials directly from the St. Louis Globe-Democrat. Aside from wire press releases, run without rewrite, and the advertisements, the favorite reading of ranchers is a column called Por Aqui, which tells who went where to visit whom, or who is visiting friends in Las Vegas. It is very much a non-malicious local gossip column, still reporting such trivial happenings as a local business man's trip thirty miles down the road to the town of Pecos for the day. The paper has carried this kind of news for at least one generation now, and is expected to do this still, at least by its rancher readers, many of whom live fifty or more miles from Las Vegas and only visit town a day or two each month.

Very few ranchers read other papers, such as the metropolitan dailies from Albuquerque or Denver. Those who do show much greater knowledge of world and national events than the typical rancher.

Almost monotonously the standard fare in magazines is the Readers Digest, with Life a close second. Occasionally one will subscribe to one of the weekly "news" magazines, such as Time, or more likely U.S. News and World Report. Those who have school age children may read Parents Magazine, and most ranchers seem to read one trade journal, although there is a variety of these, depending in part on association membership, mentioned previously.

The local radio station, KFUN, an ABC affiliate, is the usual radio station listened to. This weakly-powered station, when

reception is better, at least at night, then shares time with KOA in Denver, or its NBC sister station in Albuquerque, KOB. News and music are the programs listened to, mainly because the stations offer little else.

Most ranchers have television, with only those in places of poor reception, as mentioned earlier, not having and viewing television. News programs, such as Huntley-Brinkley are favorites with the rancher. Not all, contrary to popular opinion of ranchers, are fans and regular viewers of "western" or "cowboy" shows, but Bonanza is the favorite among those who do tolerate cows and cowboys in their recreation. A fair number admit to indiscriminate viewing, sitting watching whatever happens to be on at a given time. The Huntley-Brinkley news type of program is a source of opinions for many ranchers.

Politics and Ideology

Conservatism, particularly in politics, is the rule with cattle ranchers. The degree of conservatism preached, and often practiced, seems directly proportionate to the size of operations and all that this implies. The ranchers, Anglo and Hispano alike, are hardly apolitical. Many have run for public office and have been officers of both major political parties at precinct, county, and state levels. The present county clerk operates a medium size ranch 60 miles from Las Vegas, the county seat, using a hired hand to actually run it. His brother, another successful rancher, has been sheriff and treasurer of the county. Another man has been a state senator, and a third for a long time was a state representative.

In an area of the country where every adult male is reputed to be very active in some level of partisan politics, the ranchers hold up this reputation well. The county in rural as well as urban areas showed its enthusiasm for politics and elections by having 105% of inhabitants age 21 or older, according to the 1960 Census, voting in the 1960 general elections.

Most of the ranchers are Democrats. With the Anglos their traditional Texas orientation makes this a matter of birth and heritage. The Hispanos are Democrats by circumstances born of opportunism and self-preservation during New Deal days when survival and Federal help depended on being active in the party in power. A few stubborn Hispano ranchers, including one of the two large operators, have stuck with the Republicans, having enough resources to overcome depression and drought on their own. And some of the conservative Democratic Anglo ranchers are now shifting their allegiance to conservative Republicanism, where they feel more at home ideologically. But the typical rancher is a loyal, if worried Democrat, hoping that President Johnson's Texas background will eventually bring him back to the conservative tradition they feel he came from. There is very little of the populism talked of in Johnson's background showing in San Miguel ranchers. These people have usually supported conservative Democratic primary candidates for governor, and have in recent years seen each of these candidates lose. In a current struggle for control of the county Democratic organization, they are among the rebels trying to unseat the unpopular county chairman who has the support of conservative urban Democrats of the county and the

liberal Democratic state administration.

To a man, Republican and Democrat alike, they oppose the growing power of the one large, fast-growing urban area of the state, Albuquerque. In keeping with this, they are opposed to legislative reapportionment, which will no doubt increase Albuquerque's power and decrease that of the northern part of the state, where the size of the population has not changed in the past twenty years. If there is antagonism between Hispano and Anglo in the county, and this will be discussed later, common cause is made on this one political issue. Both groups of ranchers see reapportionment of the legislature, particularly of the state Senate, where reapportionment is still undecided, as a threat. To the Hispano, a dwindling majority in the north of the state, it means a loss as an ethnic group in power, patronage, and state funds for roads and education. To the Anglo rancher it means essentially the same things, but has more of an economic flavor to it, with density of population rather than wealth or status increasingly becoming the base of power in the state.

Small wonder, then, that both ethnic groups among ranchers are united in maintaining a status quo on this issue. Less easily explained is an equally universal belief that labor unions should have their power curtained through the device of a so-called Right to Work Law. Even the few ranchers who class themselves as political liberals feel this law should be passed in New Mexico.

The political and ideological mood of the ranchers of the county is reflected faithfully in the lobbying and publicizing activities of the New Mexico Cattle Growers Association. By no means do all the ranchers of the county belong to this group, but they do tend

to agree with most of the conservative activities of this group in the political realm. Only on one issue do most ranchers disagree completely with statements of the officers of that association. In the fall of 1964, the association protested the seating of two newly-elected Navajo members of the state legislature. Of the ranchers interviewed or spoken to in informal conversations not one felt this a proper protest. They felt that anyone elected to the legislature should be allowed to serve, regardless of tax exemption of Indian property or income on federal reservations. There was strong condemnation by many of these informants of the association's protest.

Attitudes toward state officers and agencies depend upon one's political affiliation. The Democrats are happy with the Governor, the Legislature, and the state Highway Department. Republicans assume it would all be better in Republican hands, as it has been a very few times in the last thirty years.

Attitudes toward county officials and actions of these officials again depend on party affiliation. Democrats have controlled the county since Depression days. And Democrats among ranchers have few complaints about the sheriff, the assessor, the county clerk, the district attorney, or the county's representatives in the state House and Senate. Republicans generally feel that their party could do, and has in the past, done better for the ranchers. But criticism among Republicans is mild and does not indicate serious dissatisfaction, except for the district attorney.

There is a complication in attitude toward county officials, however. The Democrats are divided in loyalty to the party's county chairman as opposed to virtually every office holder except

the assessor and the one Senator, the only officials owing allegiance to the chairman. The district attorney is seen as the focus of opposition to the county chairman. It is not just the non-organization Democrats, who now control most county offices, including the positions of the three county commissioners, who have divided loyalties. Most ranchers who are Democrats are, or have been sympathetic to this "rump" Democratic group. The Republicans back strongly the county's Democratic state Senator, seeing him as a true conservative. The district attorney is seen by Republicans as a dangerous radical, a "socialist-communist," as several Republican ranchers put it. These Republicans sympathize with the county chairman and do whatever they can to strengthen him, including arguing with some of the Democratic ranchers who are basically conservative and likely to fear anyone who is seen as an exponent of drastic changes. The Anglo population of the county sees the District Attorney as an Hispano "racist," and as the "devil" who causes all political threats and strife. Several ranchers who took part in the 1964 rebellion against the chairman are now coming around to at least a neutral position in county Democratic politics, partly because of this fear of "rabble-rousing" by a faction seen as probably wanting wide and deep changes in the power structure of the county. Such changes are not what these ranchers seek. Politics is complex in New Mexico, but the present intraparty split complicates it beyond the tolerance of many conservatives, Republicans and Democrats.

In the field of international affairs, most ranchers profess

little interest. This is partly a matter of the public media, particularly the literature, a rancher is exposed to. Those with wide reading beyond the Las Vegas Daily Optic and the New Mexico Stock-Man or other trade journals, have more and stronger opinions on American foreign policy, the United Nations, and other international matters. One nearly universal attitude at the time of interviews in the spring of 1965 was that the United States should get out of Viet Nam, that this was not our war, and we had no business there. On Cuba, the feeling was particularly strong among Catholic Hispanos that the United States should do something, that Castro should be gotten rid of. The ranchers with more knowledge of international affairs supported the general idea of the United Nations and its peace-keeping work. Those with limited reading just said they didn't know much about that group, but didn't express any hostility toward it. The Soviet Union was seen by these limited readers as bad because it is controlled by Communists. This was put stronger by Catholic than non-Catholic ranchers. Wider readers saw more of the possible uses of the Soviet Union in America's conflict with mainland China, and even saw the United States and the Soviet Union as being more alike than different in their desire for peace and general world stability. Questions were asked about Great Britain and Germany, with few responses showing any opinions from light readers, but generally friendly statements about American friendship and alliance with Britain and West Germany.

Thus in the field of international politics the majority of ranchers, who are among the people who read little on world affairs, had not much sense of involvement in these affairs. This is a typical

attitude of most northern New Mexicans, which, if it is a kind of isolationism, is a passive sort. Local and state events are the limit of most inhabitants' horizons.

The Soil Conservation Service faces the problem of resistance to new ideas daily in its attempts to introduce its recommended conservation practices. The fear of control of ranching operations, telling a man what grazing load he can maintain on a given pasture if he accepts funds from the Service for erosion control, is part of the problem. The Agricultural Stabilization and Conservation Service, successor to the New Deal A.A.A., is seen as less of a threat, supposedly because it does not make such requirements for its aid and advice. It may be, too, that it just has been around and active longer and is accepted more readily.

Throughout this research most ranchers made it clear that they wanted no control by government, no interference, as they see it, in their business of cattle production. Most of them are fully convinced of the idea that cattle ranching is the last bastion of truly free enterprise. They do not see their demands for restriction on importation of Australian beef to the United States as inconsistent with this idea, even when asked directly if this is not inconsistent.

Ranchers are by no means alone among human beings in this compartmentalization. It would be very interesting to compare the attitudes of cattle growers on this piece of ideology with the attitudes of sheep growers, who have and insist upon long-range, five year federal guarantees of price supports for wool. There are very few commercial sheepmen in the county, but both Mora County,

to the north, and Guadalupe County, to the south, have many sheep growers as well as cow-calf ranchers. From one informant, a wool buyer living in Las Vegas, it was learned that most sheepmen are also outspokenly hostile toward government involvement in the economy. An hypothesis that could be tested easily in either of these neighboring counties is that such wool producers share with cattle producers such inconsistency, a hostility to governmental involvement, even though they are far more directly dependent upon the Federal government for sales of their products at what they think are fair and just prices.

The conservatism of cattle ranchers is not limited to politics and relations with government agencies. The mode of operations, with insistence in continuing the traditional cow-calf operations, is an example of basic, ecologically relevant conservatism. Several ranchers were very interested in hearing from this investigator the experiences of the few men who have shifted to summer grazing of yearlings exclusively. As one yearling rancher put it, the only economically sensible mode of operation is summer grazing of somebody else's yearlings on somebody else's land, leased pasture. This informant is convinced that this is the only realistic method of working with cattle in the county. He also stated that none of the other ranchers run their businesses with any fiscal sense. If they knew very much about bookkeeping, he stated, they'd soon see that they were consistently losing money using the traditional mode. As it is, they really have no idea whether they are making a profit, what their capital investment is, and how long they can continue in business. He felt that the average rancher was making about as much money as if his capital were invested in municipal bonds. This return was estimated

by the informant to be about two per cent. And this amount, he noted, unlike municipal bonds interest, is not income-tax exempt.

The president of a local bank was even more clear in his wonder that anyone in ranching made any profit, or more pointedly, that anybody stayed in ranching. He said that you've got to really want to be a rancher, to love that kind of a life, to stay in it. If it's just a business, there are other, easier and better ways of making money. When ranchers were asked why they stayed in ranching and did not do some other type of work, most replied that they guessed they were to stupid to try something else, or that they didn't know how to do anything else after a lifetime of cattle raising. A few even repeated the thought that they knew there were easier ways to make a better living, but they just liked being outdoors, working at the pace of ranching, living in the country.

Comments of ranchers as to their "stupidity" in staying in the cattle business can be discounted as diffidence or fear of investigations. But the remarks of people outside ranching are essentially in agreement with these remarks. There is no reason to think that the banker merely had learned the rancher's line and was perpetuating a myth. From interview after interview it is clear that ranching is not a very worthwhile investment of capital and labor in the county, that men keep on ranching because they like the work and fear the unknown world of urban employment. Many of the ranchers are older men, past their fifties, and they know their chances of learning new skills and finding a job that will pay as well as their old trade of following cows around. The independence, however illusory, of the family cattle ranch, would be hard to match in the large organizations

or small businesses of urban employment in the mountain west. It is the people of the small villages who migrate to these centers, but seldom the cattleman as long as he has land and the ability to work.

Dependence and Independence

Independence shows forth in the individualism and self-reliance which the more verbal ranchers speak about at length. There are few ranchers who have regularly hired help, even part-time. The individualism of ranch life is combined with the institution of "neighboring," helping one another out in times of need, both emergencies and routine seasonal heavy work, as round-ups and branding of cattle. There is limited cooperation through Soil Conservation Districts, too, but this is more formal and takes in many people whom a rancher scarcely knows. Much depends in this latter cooperation on the skill of the federal official assigned to the District. The major part of the county is in the Gallinas-Tecolote-Rendija Districts, all under the supervision of a new man who has revitalized conservation work by getting out and talking with all the people in the area, not just some of the Anglo ranchers with whom an Anglo agent might feel more at ease.

But cooperative effort ends at the Soil Conservation District level. There are no grazing cooperatives, and certainly no marketing cooperatives. Individualism, in the sense of each man being an economic agent for himself alone, is the normal way of the rancher. Only among the Hispano ranchers is this modified, but not contradicted, by occasional cooperation, particularly in drought or other

emergencies, in matters other than typical "neighboring" or such quasi-governmental organizations as conservation districts. It is every family for itself, again, not unlike Vogt's "atomistic social order" in Fence Lake, his "Homestead" community.[4] If one is to believe, as many writers such as Knowlton[5] do, that close cooperation was a chief feature of rural Hispano villages of northern New Mexico, then one must admit that the Hispano ranchers have lost much of the sense of communality that their grandfathers once had in the villages to the west of most modern ranchers. In his concern for welfare of self and immediate, nuclear family, the typical Hispano rancher is about as individualistic as his Anglo ranching neighbor. The question here might be, assuming a change, is this a part of assimilation to Anglo-American culture or a normal adaptation needed for survival as a cattle rancher, regardless of ethnic identity. From the evidence obtained, it would be difficult to say which determines the prevalence of individualism in all types of cattle ranching. A possible explanation, of course, is that Hispano culture has a strong individualistic emphasis, about as much as Anglo culture does. But such an idea is heresy among the rural romanticists who claim authority for knowledge of Hispano-American culture. Rather than debate this issue, let it be sufficient to say that individualism and competition are more valued, more practiced, among all ranchers, than are collectivism and cooperation.

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[4]Vogt, op. cit., pp. 140-172.

[5]Clark Knowlton, The Spanish Americans in New Mexico," Sociology and Social Research, 45, (July, 1961), pp. 448-454.

Hobbies and Recreation

As for spare-time activities, fishing was mentioned often, and was the common outdoor recreation. Among Hispano ranchers dances were both recreation and social activity. These are usually Saturday night affairs, with all the family going, at the hall of a local village. Vogt mentions similar Saturday night dances, although his were accompanied by heavy drinking of "salty dog," a whiskey mix, by the men outside the hall.[6] Although nothing was mentioned during the present research about social drinking among the men, there is no reason to think that the population of the county is exceptional. The many rural bars and dance halls give plenty of opportunity to practice the traditional hard-drinking Saturday night of not only the cowboy, but also at least the general rural and urban Hispano male segment of the population.

Hunting is, somewhat surprisingly, not a hobby for many of the ranchers. In fact, a good many are repelled by the thought of hunting. Conjecture as to the motives or reasons for such repulsion would be interesting, and might show a truly ecological basis. Certainly there is game, deer, antelope and smaller animals, all over the ranges of the county. These animals are not seen as threats to grass or soil by ranchers. There is even very little coyote extermination done in the name of safety of the

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[6]Vogt, op. cit., p. 117.

herds. There is a "live and let live" air to much of this refusal to see hunting as recreational "fun." These creatures are as much a part of range life as cattle and horses.

CHAPTER IX

THE ETHNIC FACTOR IN RANCHING

In San Miguel County there are two somewhat different Euro-American cultural groups, Anglo and Hispano. Some people of both groups are carrying on the same basic economic activity, cattle ranching. This chapter is an examination of possible differences in this activity related to ethnicity. As a corollary, the cultural ecological question of the influence of the mode of adaptation to the environment on the way of life of the people must be considered.

Delineation of the Two Cultures of the County

Although it may seem to the casual observer that at most what is present in ethnic terms in the county are two variants on Euro-American culture, in the eyes of the people of the county there are definitely two separate groups. Since ranchers are not people apart from the rest of the county, a discussion of the ethnic factor among them must take into account the general situation in the county. The overall picture is very similar, allowing for differing times and places, to the ethnic separatism described by Kluckhohn in western New Mexico[1] and by Madsen in South Texas.[2]

The ethnic division of the county is distinct among the general population, with little tolerance of people who are not

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[1] Florence Kluckhohn, "The Spanish-Americans of Atrisco" in Florence Kluckhohn and Fred L. Strodtbeck, Variations in Value Orientations (Evanston, Ill.: Row, Peterson and Co., 1961), pp. 175-257.

[2] Madsen, op. cit..

identified with one or the other group. This is not to say that there is not a group of Hispano people nearly fully assimilated into Anglo-American culture, nor a very small group of Anglos sympathetic toward and more than merely tolerant of Hispano culture and people. But in general the two groups are distinct, and highly ethnocentric. The Hispano are very conscious of being members of "la rasa," sometimes even called "la rasa santa," a group with God-given status, and the Anglo, in the face of such ethnic solidarity, tends to see all other people as "white," or "Americans."

In business dealings, in some recreational activity, and some political groupings, the two associate. But, for example, endogamy is strongly adhered to, with intergroup marriages usually taking place only when one partner is not a resident of the area, or when the couple move away from the area soon after the marriage ceremony. Religion divides the population, with Hispano people associated with Catholicism, and Anglo with conservative Protestantism. In the general population there are many non-Hispano Catholics, but these are not seen as "real" Catholics by the Hispano. The Anglo Catholics often say that Hispano Catholicism is not really Catholicism , but a combination of Catholicism, folk beliefs, healing practices, and fatalism that contradict Catholic teachings.

The division of the one urban area of the county, Las Vegas, into two separate political units, the Town overwhelmingly Hispano, approximately seventy-five per cent, and the City not quite so overwhelmingly Anglo, about sixty per cent, illustrates the magnitude of ethnic separation. There is, however, a tendency for upwardly mobile Town Hispanos to move to the City, where there

are much better housing, schools, stores, and such municipal facilities as paved streets.

To illustrate further the width of the gap between the two ethnic groups, the two main public school districts of the county, taking in all the county except a small area around the village of Pecos, are also identified as, on the one hand, predominantly Hispano, the Town district, and on the other, predominantly Anglo, the City district. Although New Mexico has a law forbidding the use of any language other than English as the language of instruction for all but language course, the Town district continues to use local Spanish freely in classes. Very few Anglo children attend the Town schools, although many live in the rural areas of the Town district. They attend school in the City district, as do many Town district Hispanos seeking an English-language education, and seeking instruction that many people claim is superior. Talk of consolidation of the two districts, although perhaps rationally efficient and desirable, stirs most Anglos and some Hispanos of the City to great distress.

In past years, many observers agree, discrimination against both Hispano teachers and students in the City schools was high. Today there are many Hispano teachers in the City district, and the majority of students are Hispano, well over seventy per cent of the high school senior class, for example. Discrimination in hiring teachers now is found in the Town district, with only two or three Anglo teachers in the system. There is a strong flavor of vengeance to the anti-Anglo prejudice of many Hispanos, giving what in the past it is felt has been received. All this helps maintain ethnic separation.

The Hispano group seems held together partly by its open and expressed hostility to the Anglo minority, really all people in the county who speak English as a first language, a very mixed group that includes Texans, native-born non-Hispanos, migrants from eastern states, anyone who is different from the majority.

It is very easy to provoke interethnic hostility, which among Hispanos is really xenophobia. This is done intentionally during local political elections, particularly by the Democratic faction controlling the Town and Town school district. Such was the case in the Democratic primary election in May, 1966. But hostility is frequently unintentionally aroused in the Hispano population should a non-Hispano make a public statement about the Hispano population that even vaguely seems critical or unflattering. There is high sensitivity, particularly among Hispano leadership, to any remark or act that appears demeaning. Along with this, criticism of individual Hispanos by Anglos is very frequently, almost always, taken as an expression of ethnic prejudice. Burma's report on public education in northern New Mexico was actually withdrawn and suppressed in the state because of the outcry of Hispano politicians and officials that they were being criticized, that their faults were being publicized unfairly.[3] More recently, in May, 1966, the director of the San Miguel County Community Action Program has successfully turned away charges of incompetence by claiming such charges were made against him by Anglos solely because he is Hispano. Generally the Anglo tactic in response to this hypersensitivity is to say and do nothing that can be interpreted as hostility or criticism. The Anglo population of the county, nearly forty per cent, continues

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[3]John H. Burma and David E. Williams, An Economic, Social and Educational Survey of Rio Arriba and Taos Counties (El Rito, N.M.: Northern New Mexico College, undated, but after 1959).

to act as the majority of Hispanos see the group, intruders, foreigners , who should politely "be seen and not heard." Withdrawal, surface passivity and submissiveness are the tone of Anglo relations with the Hispano majority. The economic affluence and dominance of the Anglos are obvious, and most Anglos see little to gain by expression of their superior position. In private conversations and in small groups the frustrations of the Anglo population may be strongly stated in terms of derogation of the Hispano minority, but this is not done in public. The separation of the two ethnic groups is a reality, and sensitivity to possible insult is another barrier.

To the question are there two separate societies in San Miguel County, the answer is that there is a single society, but segregated. The separation has been greater in the past, and it is decreasing as the number of Anglo people grows and more Hispano people achieve middle class status. There are many Hispanos openly seeking assimilation, particularly City high school students. Group separatism is perpetuated, however, for many of these more assimilated people leave Las Vegas and the county permanently as they acquire education and skills which the still declining community cannot employ. The less educated, the less achievement-motivated Hispano people, including many third generation welfare recipients, stay behind. Loomis speaks of "polite separatism" as the "basic nature of boundary maintenance of Spanish-speaking groups in New Mexico."[4] The separatism is not always polite, but separatism there is. His subject community,

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[4]Charles P. Loomis, "El Cerrito, New Mexico : A Changing Village," New Mexico Historical Review, 33, 1958, p. 33.

El Cerrito, is in San Miguel County, making his concept of particular relevance to this study.

Language, religion, adherence to different cultural traditions, and ethnocentrism separate the segments of the society. Spanish is the first language of the Hispano, English that of the Anglo. Next to leaving "the" church, next to abandoning pride in "la rasa," refusing to speak Spanish or to allow one's children to speak it, is an effective way to be rejected by the ethnic group. To speak English only, to express one's group loyalties to a broader group than local people claiming Spanish ancestry, to formally quit Catholicism and join a Protestant Anglo church, and to marry an Anglo, to do all this makes one an Anglo in the eyes of the Hispano group. But it does not make a person an accepted member of the Anglo segment. Unless one is willing to be a member of no specific ethnic group, it is very difficult to become assimilated from Hispano to the nationally dominant group and still live in San Miguel County or the surrounding region.

The rules of the society make it clear than an Hispano, with very few exceptions, will only be accepted into the Hispano segment. Mutual prejudice keeps people within the group they were brought up in. To succeed in leaving one's group, one must leave northern New Mexico. A person is either in one group or the other. Second and third generation non-Hispano residents are still considered outsiders. The ethnic boundaries may be flexible, with changes coming slowly, but the boundaries are still strong and endure.

Ethnic Delineation Among Modern Ranchers

The separatism found in the general population is also found among ranchers. The religious factor of differentiation is even sharper among ranchers, with Hispanos almost always Catholic, and Anglos Protestant. Linguistic difference is as strong in the ranching population as in the rest of the county. Endogamy also holds as much among ranchers. What is somewhat, and only somewhat, different is the less overt expression of prejudice and ethnocentrism among ranchers. It has already been stated that Anglo discrimination is more private than Hispano. Among ranchers there is less expression of anti-Anglo prejudice than among the general Hispano population. Following a common occupation, in the same traditional ways, with more frequent interaction on a level of equality, ethnic separatism seems muted among cattlemen. Except for the very smallest scale Hispano ranchers, most ranchers are economically middle class. It is among the low income people of the county, nearly all Hispano, that anti-Anglo prejudice is strongest. Further, even though most Anglo ranchers as first generation immigrants to the county from Texas, bringing with them strong prejudices toward what they call "Mexicans," their prejudices are mainly directed to non-ranching, lower-class Hispanos.

Although prejudice appears less between ranchers of the two ethnic groups, it is certainly true that ranchers are also identified, both by themselves and by the total population, as belonging to either the Anglo or the Hispano group. Ethnic separatism

exists among ranchers as among the rest of the people of the county. Thus it is proper to consider the relationship between ethnicity and ranching as a way of life.

Problems Involving Culture and Adaptive Practices

Given the two cultural segments of the ranching population, an interesting situation arises for the testing of the cultural ecological position put forward by Steward, stating the primacy of environment over cultural factors. His 1955 statement on this relies heavily on the concept of a "cultural core," to be discussed shortly, and upon a refutation of the influence of culture.

> The normative concept, which views culture as a system of mutually reinforcing practices backed by a set of attitudes and values, seems to regard all human behavior as so completely determined by culture that environmental adaptations have no effect.[5]

He goes on to exaggerate what might be called "cultural determinism," assuming the whole of technology, the means of adapting to a physical environment, is culturally determined. Steward is particularly concerned about adaptive and economic activities he calls the "cultural core," defined by him as follows:

> The constellation of features which are most closely related to subsistence activities and economic arrangements. The core includes such social, political, and religious patterns as are empirically determined to be closely connected with these arrangements. Innumerable other features may have great potential variability because they are less strongly tied to the core.[6]

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[5] Steward, op. cit., p. 37.

[6] Ibid.

Freilich, in research similar to the present study, attempted a test of Steward's cultural ecological statements in Trinidad with Negro and East Indian peasant farmers.

> A situation was selected with natural controls to test the hypothesis that a shared mode of cultural ecological adaptation would lead East Indians and Negroes to show cultural similarities related to the shared mode of adaptation. The data collected necessitated the rejection of the hypothesis. It must be concluded then that the type of cultural ecological adaptation here considered is not a causal factor of change.[7]

He continues in refutation of Steward:

> I would submit that what Steward calls "historical factors" are of far greater import and deserve far more attention than he would allow. Such historic factors are in part the cultural traditions of groups. The importance of culture as a persisting element in human life is both implicit in general anthropological usage and attested by various empirical studies.[8]

In this study of ranchers in San Miguel County, with people of two cultural groups attempting the same adaptation to the environment, an excellent chance is found to test further the cultural ecological question. Given a technological core of activities common to ranchers, is the culture of either group of ranchers noticeably changed from that of other, non-ranching members of the group? In other words, is the adaptation determinitive of the culture of ranchers? Further, the point Freilich raises, the greater influence of culture, at least in his Trinidadian cases, requires consideration that ethnic identity influences, perhaps even more than the environmental imperative

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[7] Frelich, op. cit., p. 35.

[8] Ibid.

does, the mode of adaptation. These questions will be considered following a description of what was found to be the cultural core of cattle ranching in San Miguel County.

The Cultural Core in Cattle Ranching

Following Steward's definition of a cultural core, given in the previous section, an attempt will be made to extract such a core of traits from the data presented in previous chapters. The obvious aspects of such a core are those dealing with the breeding and grazing of cattle, and closely related technical matters. The cattle are allowed to graze unattended on extensive fenced pastures of native grasses year-round. Cattle are bred for early sale, after the first summer or first full year, to cattle feed lots and feed farms in the American Midwest. A herd of mother cows of a commercial Hereford type is maintained on the range, with several bulls of somewhat purer Hereford stock to service the herd. Cattle are watered most often from stock tanks fed by precipitation run-off or windmills. Control of herd location by fencing, water supply, and salt blocks is carried on without compelling rigidity. Aside from such work in shifting the herd upon the range, there is little attention required for a herd. Fences are kept repaired as breaks are discovered, but inspection of the fence, "fence-riding," again is no frequent or compulsive activity. Cattle ranching is a slow-paced occupation, although emergencies such as floods, blizzards, and seasonal roundups speed up the tempo. Ranching as practiced in San Miguel County is an easy-paced way of life, very much an

out of doors activity requiring good physical condition and willingness to exert sometimes frantic efforts for short periods of time.

The ranch operator most frequently lives on the land he controls and uses for grazing. If not, he lives very near such land. Rural residence is thus common. The pattern of life is one common for modern American rural dwellers. Ranchers look to the urban area, and to a lesser extent, the rural settlements, for services such as schools, churches, stores, entertainment, and professional services. Ranchers are usually married, with several children. Since ranchers tend to be middle-aged or older, their offspring are either adults or adolescent children, away from the ranch home either permanently or as school attenders daily taking the bus to urban or village secondary schools. Ranch homes are modern, among the best rural dwellings, with all the amenities of modern American life.

All but the largest ranches are essentially one-man operations. During periods when additional workers are required, as in roundups of the herd, neighbors, relatives, and even urban friends are called upon for help. Ranchers have frequently expressed a dislike for working with or supervising other people for prolonged periods. This is one of the reasons given for abandoning sheep raising, avoiding dealing with many full-time employees needed for constant tending of sheep herds. Ranchers have even succeeded in avoiding the difficult task involved in shipping cattle off the range to market, which work requires extra hands, by selling the cattle on the range and requiring the buyer to remove the cattle. Most ranchers are not attracted to urban positions calling for prolonged and close working with others. They prefer the independence of ranch life, unromantic though

it really is. With ethnic differences to be discussed shortly, ranchers lead and prefer a more isolated existence than the rest of the county's population.

Without repeating too much of what has been covered in earlier, descriptive chapters, this is the cluster of activities closely connected with the business of raising beef cattle. There are many things that ranchers do not do that one might expect would be done. Neither group, Anglo or Hispano, is much concerned with regular preventive veterinary medicine, either rancher or veterinarian administered. There is little concern with range improvement practices other than government-sponsored soil erosion control. There is no local cattlemen's association, and few rancher belong to the Farm Bureau organization of the county. Cooperative activities such as grazing districts or similar group work in the National Forest lands is limited to father-son efforts of a few. Most of the land in the county used for cattle grazing is privately owned, underlining the individualistic flavor of ranch life. Extension and education services are little used by ranchers, at least partly because the Extension service is primarily interested in working with the irrigation farms of the river valleys, limited to a few thousand acres clustered around Hispano settlements in the western Las Vegas area.

Ethnic Variations on the Cultural Core

One of the key differences between Anglo and Hispano ranchers is the location of homes. The Anglo rancher is far more likely to

live out on the range in a very isolated location than is the Hispano rancher. The latter frequently lives in or very near a small rural village of fellow Hispanos. The difference in residence makes for many other differences, including the continued influence of Hispano culture upon ranchers of that group who might well be less influenced were they living in greater isolation. Living in close and continual contact with other Hispanos means that aspects of the culture that might be lost in following the more solitary Anglo pattern are kept. Spanish thus is a language that is used not only within the rancher's family, but among all the villagers. Mead has noted this necessity for close community association of the Hispano:

> The basic cultural fact of traditional Spanish American life is the village. To be Spanish-American is to be of a village.[9]

Village residence does not make ranching more difficult than residence on the range. Before the days of cars and pick-up trucks it certainly limited the radius of operation of Hispano cattlemen, but the environment does not place an absolute demand on the rancher to live in the midst of the land he utilizes. But village residence does seem to reinforce the ethnocentrism and caution about outsiders and changes in the way of life outsiders may bring about. Hispano ranchers are more conservative in their ranching methods, their technological means of adapting to the surroundings. Not one such rancher uses any mode other than cow-calf operations grazed year

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[9]Margaret Mead, editor, Cultural Patterns and Technical Change, "The Spanish Americans of New Mexico, U.S.A." (Paris: UNESCO, 1953), p. 169.

around on native grasses, using the standard, commercial sort of Hereford stock. This conservatism will be disucssed further in the final chapter, but it is a fact, one at least partly attributed to "historical factors," or the cultural milieu of Hispano ranchers. Clearly there is no environmental imperative to conduct ranching only by this mode.

Anglo ranchers, on the other hand, show much more variety in their technology. They are much more receptive to new ideas in their ranching, and willing to experiment with these. They are less accepting than Hispano of "things as they are." Not only are different breeds of cattle sometimes utilized, not only are range improvement measures such as removal of trees and shrubs from pastures or reseeding of the range in better grasses attempted, not only are different uses of the range for grazing of a breeding herd and annual production of calves done, but several Anglo ranchers have made the radical step of using land they do not own and do not want to own, land leased from others. In the easternmost part of the county the innovations are most frequent and most marked among Anglo ranchers. Even here the Hispano ranchers of the area remain loyal to the old technology, hardly different from what their ancestors did with livestock two or three hundred years earlier over in the Rio Grande valley to the west of the county.

As we have seen in discussing the census of ranchers, many of the Hispano ranchers are small-scale operators, while most of the Anglo ranchers are larger operators. Not only in the methods of running a ranch, but also in the magnitude of operations there is a cultural difference. The best land is in Hispano hands, yet given

the richer environment, cultural factors, the history of the Hispano people in the county, has not allowed the accumulation of large tracts of land by these people. There are exceptions to this, but they are few and they involve people marginal to Hispano culture.

The Primacy of Cultural Factors

To the questions put by Steward and Freilich earlier in this chapter, the answer is clearly that the technology of ranching, the vital means of assuring successful adaptation to the environment, does not determine the culture of the people involved. It does not even shape the whole of what has been empirically found to be the cultural core of ranchers of the county. There is abundant evidence of the importance of culture in determining what the specific techniques utilized are, making Freilich's contention that, given an environment that will allow variations in technology, historic factors determine the adaptations a people will use.

San Miguel County cattlemen present a situation very similar to Freilich's Trinidadian peasants. As his Negroes and East Indians remained members of their cultural groups, differing from other members of their groups only in the specific and narrow area of techniques of farming, so the Hispano and Anglo ranchers of this study remain members of their cultural groups in all but the fact that they have a common method of making a living. One may concede that Anglo ranchers have some characteristics setting them apart from other Anglos, but the same is not true of Hispano ranchers. With both ethnic groups of ranchers the backgrounds of the groups

to a large extent determines what techniques are used in ranching, the inverse of the cultural ecological idea that the technology, the mode of adaptation, determines the "cultural core," the activities closely related to adaptation.

CHAPTER X

CONSERVATISM IN RANCHING TECHNOLOGY

In the course of this study it has been shown through several sets of data that cattle ranching has becomee the only successful adaptation to the environment. Crop production, especially in the form of dry farm homesteads, survived as an attempted adaptation only long enough to force off the land sheep raising. Thus, in ecological terms, present-day cattle ranching is the end of a line of succession on the land.

Following another ecological concept, adaptation to a specific or local environment, attempts were made to show whether or not the gross environmental differences in the county brought forth different forms of adaptation within the general form of cattle raising. No such differing forms were found. In terms of technology, ranching is carried on in the same manner in all three ecological zones of the county, Mountain, Plateau, and Plains.

It was while such attempts were being sought for that it became clear that other factors than physical environment determined variations in the mode of adaptation. These factors have been labelled "historical" by Steward and by Freilich. With two distinct Euro-American cultural groups engaged in ranching in the county, it has been possible to demonstrate that these factors are what determine the life of the people engaged in ranching, including many aspects of this life that Steward has called the "cultural

core," activities closely related to ranching as an economic endeavor. The division of the county into Anglo and Hispano groups has made such a demonstration of the primacy of non-environmental factors, cultural factors, conclusive.

Even though the raising of cattle has been a successful method of earning a living from the land of San Miguel County, the technology used by most ranchers is less than a fully efficient adaptation. Ranchers are vaguely aware that they could do a better job of ranching. But, again, there are factors entering into the situation that refute the idea of the physical environment directing ranchers into what might be seen as more rational, more effective means of securing cattle ranching as a successful adaptation to the environment. These factors are discussed briefly in this chapter.

One of the most important problems found by this study is the persistence of traditional technology among ranchers. Aside from the fencing of the range into privately owned pastures, cattle ranching in the county is little different from late nineteenth century, High Plains cow-calf operations on open range. Ranching is still predominantly the keeping of breeding herds of beef cows, together with a few bulls to service them, with an annual production of a calf crop in the spring. These calves are sold in early autumn, with only a few heifer calves kept as eventual herd replacements when older cows are culled out. The cattle today are commercial grade Herefords, whereas in past generations the celebrated Longhorn and other Mexican-derived cattle were used. Fences and a more marketable breed of cattle are the only changes in cattle operations in the majority of ranches in the county since the closing

of the Public Domain about the time of World War I. Feed is still almost exclusively natural grasses of the range, with very few attempts to improve the range or utilize scientific management techniques even on the range.

So pervasive is this conservatism that the question might well be why some ranchers do adopt changes in technology rather than why the majority do not. But given the progressiveness not only of a few Anglo ranchers within the county, but also of most ranchers in surrounding counties to the north, east, and south, the central problem is an explanation of conservatism in the subject county.

Considering that cattlemen have adopted much of modern technology in the rest of their lives, the question then is why have they not done so more in the important matter of the means by which they earn their livings. Electricity and bottled gas are found in nearly all ranch homes. Automobiles and pick-up trucks have replaced horses and wagons. Ranchers' homes are comfortably modern. Education has a high value for most of them and many have made real sacrifices to give their children the training they realize is needed for working in a modern industrial society. These are not retarded "hill-billies," but citizens respected and admired in the social structure of the county.

It appears there are many overlapping and compounding reasons for this technological conservatism, which is emphasized by contrast with the more progressive, innovative operations found in the extreme eastern section of the county and the few unorthodox ranches found in the rest of the county. Before discussing the reasons, an attempt

will be made to list them.

1. Scarcity of capital
2. Poor fiscal methods
3. Advanced age of ranchers
4. Comparative wealth of ranchers
5. Relative success of ranching as an adaptive mode compared to crop farming
6. Education level of ranchers
7. Reaction to changing physical habitat
8. Absence of agricultural demonstration and educational facilities
9. Lack of local ranching associations
10. Ethnic factors
11. Ideological factors

The possibility of isolating any single factor as determinative is unlikely. Superficially, it might be expected that ethnicity explains all else. Hispanos are conservatives; Anglos more willing to use new technology. Such a clearethnic difference has not been found among ranchers of the county. It is true that only Anglo ranchers are engaged inoother than traditional ways, but most Anglos still ranch in the traditional way. There is a cluster of factors associated in part with ethnicity, but not all reasons for conservatism are related to ethnic differences. Another cluster of factors center on finances and business methods. Other factors are less easily classified under general headings, but help explain the persistence of traditional methods and the absence of new ones among nearly all commercial cattle ranchers of the county.

Scarcity of Capital

For all business in the county there are very limited sources of capital funds. Banks in Las Vegas are extremely conservative, and there are few private individuals as sources of money for financing the costs of adopting new technology. Only in communities to the east of the county, such as Tucumcari and Clayton, are there banks willing to risk loans to innovative ranchers. Such availability of funds helps explain why most of the progressive ranching operations are in the extreme eastern tip of the county, near more ready sources of capital for innovations.

Poor Fiscal Methods

A possible source of funds for new methods is a rancher's own money. Here the second factor, poor bookkeeping and accounting practices comes into play, for many ranchers have only a faint knowledge and understanding of their financial situation. Such poor knowledge of one's own finances also explains the reluctance of the conservative Las Vegas banks to provide financial backing for change. However, ranchers throughout the Southwest are notorious for their poor bookkeeping, according to Robert Gray, agricultural economist at New Mexico State University.[1] Lack of understanding of one's fiscal standing certainly does not in itself prevent innovation among ranchers in other parts of the state.

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[1] Personal Communication, February 1966.

Smaller ranchers may have very little cash reserves, as well as little chance for extensive bank credit, whether or not they keep good books. Capital for changes and improvements is even less for these men than for medium and large scale ranchers. There are no small scale ranchers in the county engaged in anything but traditional ranching.

Age

Age of ranchers, with very few exceptions, was well into older middle years or more. When ranchers were asked why they were in ranching, one of their almost uniform replies was that they were too old to change to any other kind of work. No direct questions were asked as to why other methods of operation were not used, but it was clear from answers to other questions about new techniques that these men had no desire to try these. No one said, "You can't teach old dogs new tricks," but this was implicit in rancher response to questions about adopting new practices. Many of the younger men in ranching are sons of Hispano ranchers working with their fathers, small or medium scale ranchers, the most traditional ranch operations of the county. The expectations of the older ranchers, the majority of all ranchers, are for retirement, leaving ranching, with their lands to be sold at death or retirement.

Comparative Wealth of Ranchers

San Miguel County is among the most poverty-stricken in the United States. Such poverty has been common among Hispano people there at least since 1920. The dependency rate of the county, as

calculated by the State Department of Public Welfare, was 14.4% in June, 1964.[2] 3,390 people were receiving financial assistance from state welfare funds. In 1960, 19.5% of the male work force of the county was unemployed. Median income in 1959 for all families in the county was $2,905, rural farm families nearly the same at $2,980, and rural non-farm families the lowest, $2,060.

Ranchers as a group have comparatively high annual income, with a relatively small ranch of 80 mother cows averaging about $4,000, a medium sized ranch of 150 cows averaging $7,500, and a large ranch of 300 cows twice this last amount, $15,000. In terms of one's many neighbors in rural areas, ranchers are very well-off. These ranchers are often termed "millionaires" by other residents, even when ranch income may only be in the range of seven to ten thousand dollars a year. Incentives to increase income by adopting new practices are weak with such relative prosperity. Not only this, but especially among Hispano-village-dwelling ranchers, there are positive sanctions against excessive income, or at least against display of such income.

Relative Succes of Ranching as an Adaptive Mode Compared To Crop Farming

Ranch income is high compared to crop farming income. It is one indication of the more secure niche achieved in the habitat by cattle ranchers. Many ranchers are well aware that they have a

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[2]State of New Mexico Department of Public Welfare, Annual Report, 1964 (Santa Fe, New Mexico, 1964).

better way of utilizing the environment than the farmers they have largely replaced. The rise in land values in the past thirty years indicates the land is now more productive as range land than it was as crop land in the homesteading era. Such relative success, especially among those whose fathers were farmers in the area, confirms ranchers in their belief that they have a way of earning a living that is the best the land can support. Changes are not seen as necessary, with good incomes now and over past years.

Education of Ranchers

Although income is high for ranchers compared to other rural residents, level of education is not drastically higher. Rural farm education level in 1960 was 8.3 years, with rural non-farm slightly less at 7.1 years.[3] Ranchers do not feel more education is needed for ranching, even though they value education for their children, whom they do not generally expect will stay in ranching at maturity. The low utility of education reflects the idea that ranching is a thing one learns by doing, not by studying, reinforcing perpetuation of ways of ranching one learned at his father's side, the traditional ways. Lionberger has noted the relation of education to adoption of new practices, and his conclusion is confirmed in this study.[4]

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[3] U. S. Bureau of the Census. U. S. Census of Population: 1960. General Social and Economic Characteristics, New Mexico, op. cit. pp. 139, 144.

[4] Herbert F. Lionberger, Adoption of New Ideas and Practices (Ames, Iowa: Iowa State University Press, 1960), p. 97.

Changing Physical Habitat

Considerable discussion earlier showed the recent dessication of the environment. Together with other factors this has eliminated commercial crop farming as an adaptive mode. It also has led to deterioration of grasslands, the foundation of traditional ranching. With additions to ranchers' holdings blocked by hobbyist expansion, the response to reduced productivity of the land has been retrenchment, cutting back on operations. Innovation, trying new ways of coping with the habitat, is the last thing most ranchers think of. In combination with the other factors listed here, the decrease in utility of the land causes greater conservatism, not experimentation or abandonment of traditional techniques. The response to drought is often putting more cows on the range or selling more cattle, trying to keep income at a normal level, not putting money into capital improvements.

One response to a failing environment, perhaps the ultimate response, is abandonment of ranching completely, selling out. Most ranchers see adjustment to the environment in the direction of retrenchment, then abandonment, not trying new techniques or investing in change. This is the dominant, pessimistic direction of adaptive effort in a continually dessicating and deteriorating environment.

Absence of Agricultural Demonstration and Education Facilities

Like much else reinforcing conservatism, this factor is made sharp by the opposite situation in the extreme eastern portion of

the county, near Tucumcari, and "Little Texas," the tier of New Mexico counties bordering Texas. There is a state agricultural experiment station at Tucumcari, at present working on weight gain through pen feeding of purebred bulls. The rest of the county, so far as ranchers are concerned, has no extension or demonstration agencies. The County Extension Agent spends all his energies with the small-scale irrigation farmers in the Pecos valley villages. There is thus little that ranchers in the western two-thirds of the county learn from technicians who could possibly help them. These ranchers are, without any deliberate act of their own, cut off from most sources of information and demonstration on new ranching technology.

Lack of Local Ranching Associations

Another means of learning acceptable new ways of coping with the environment, through occupational associations, is weak among ranchers. There are no local, county, or regional cattlemen's groups to transmit new ideas. While many ranchers belong to the State Association and read its journal, they do not learn much of adaptive use from these. As with other factors leading to conservatism among these men, low level of education, inadequate finances, faith in traditional practices, all prevent even these limited means of communicating new ideas from reaching the stage of acceptance and practice.

Ethnic Factors

Earlier it was stated that one might expect the ethnic factor

to be the overriding one in adherence to traditional ranching. But the evidence of this study shows conservatism among both Anglo and Hispano ranchers. Studies of Hispano culture in northern New Mexico have often concluded that Hispanos are in general terms more conservative, more tradition-minded than Anglos. Many of the factors already cited in this chapter, lesser economic resources, relative wealth of village-dwelling ranchers, can explain a great deal of Hispano conservative ranching practices.

One ethnic factor, the hostility of many Hispanos to nearly all Anglo-American culture, certainly has compounded non-ethnic reasons for virtually no innovations in ranching being adopted by Hispanos. Such Anglo ways are made even less attractive by their use by hobby ranchers, seen as both Gringos and spendthrifts.

Saunders, in other parts of this same region of New Mexico, found great resistance to Anglo medical practices because of this anti-Anglo hostility and suspicion.[5] Such Hispano hostility as a reason for conservatism is partly negated by a few larger Hispano ranchers, who work closely and have warm social relations with not only commercial Anglo ranchers, but hobbyists, too. Yet these men do not adopt the new practices their Anglo neighbors have adopted.

There can be no question that one of the most distinguishing features of Hispano culture, the use of Spanish as a home or first language, slows down Hispano adoption of new practices. It is said

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[5] Lyle Saunders, Cultural Difference and Medical Care: The Case of the Spanish-Speaking People of the Southwest (New York: Russell Sage Foundation, 1954)., pp. 158-159.

of most Spanish-speaking people of the county that they are illiterate in two languages. Given past and present educational practices in the schools of the county, Hispano ranchers have less ability in reading English than do Anglos. Hence, these people have less access to knowledge of new ranching technology from English-language literature.

Religion, at least among ranchers, is essentially an ethnic matter, with Anglo ranchers nearly all Protestants, and Hispano almost entirely Catholics. It does appear that differences that might appear to be religious ones are really ethnic ones.

Further, many apparent ethnic differences turn out to be less this than a matter of external factors, the circumstances most Hispanos are in. Ethnic factors cannot be discarded as irrelevant, but neither are they as decisive in explaining ranching conservatism as might be supposed.

Other Factors

There are other factors which might, without stretching definitions much, be called ideological. They appear to be results of other factors, more derivative than causal in themselves. For example, there has arisen a belief among Western ranchers in general that they are "the last bastion of free enterprise," if not in all American economic life, then at least among agricultural people. Many San Miguel County ranchers reject government subsidies on this economic rationale, and probably also reject

government-sponsored technological changes. Part of the reason for rejecting such technology is fear of government interference in ranching operations, telling a rancher, for example, how many cows he can have on a given piece of land.

A second ideological factor, already mentioned in discussing other factors, is the pessimism of most ranchers. They do not expect that their fortunes will improve, and they do not think most innovations will help maintain or enhance their ranching operations. They share the general pessimism of most residents of the county that things are getting worse and that there is little a person can do about it.

The third ideological factor is what Martin calls "ranching fundamentalism," involving

> . . . those groups of people who know no other way of life and/or who romanticize the carefree independent life of the cowboy.[6]

Men ranch because they like the outdoor work, the infrequent periods of intensive work, rural residence, and the prestige their occupation has both locally and in the United States in general. It is not entirely a matter of old age that keeps men in ranching and out of other occupations. These other jobs have less status, and usually less compensation. If attempts are made to adjust to changing conditions, they are made so that the rancher can stay in his preferred occupation until he is too old to do any work,

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[6]William E. Martin, "Relating Ranch Prices and Grazing Permit Values to Ranching Productivity (paper read at the American Society of Range Management, New Orleans, La., February 3, 1966).

until he must retire. No rancher is seriously considering quitting his ranch, tempting as the offers of hobbyists to purchase his land may be. His children may liquidate his holdings on his death, but he will not sell in his lifetime. The people who had lost the desire to stay in ranching have sold their lands, mostly to hobbyists. These less persistent operators are no longer in ranching. The ranchers who remain do not intend to follow their example.

Summary

Cattle ranching continues to be the best commercial use of rural land in San Miguel County. In spite of degeneration of the range through decreased precipitation and overgrazing, many men continue what is a relatively high income occupation using traditional methods of operation. There is little information on newer methods available to most ranchers, and little incentive to use such innovations. Capital for such change is very scarce, even should a need be felt to make changes. Cattle raising is the most profitable agricultural activity in the county, the most successful adaptive mode in this habitat. Even with a decreasingly hospitable environment, using the traditional cow-calf operations on native grasses furnishes enough income, enough satisfaction to ranchers of both ethnic groups. They feel very little reason to follow the examples of the ranches of the extreme eastern part of the county and the affluent hobbyists in what are called "foolish" and "wasteful" innovations in feed, in breeds of cattle, and in other operations than calf production. The environmental changes are

recognized, and the ranchers know they cannot continue their ranching without modifications. They are pessimistic, for they do not see that new technology will provide a better adaptation to the environment. Hopefully, they can continue in traditional ranching methods for the years of active life remaining to them. Then the land will go to the highest bidder, "the hobby rancher." Perhaps in another generation there will still be some commercial ranchers on the land. But there will be many fewer than today, given federal tax regulations that encourage hobbyist expansion. There will be abandoning of old ways of ranching. Today the pressures are not strong enough to force change, but in the future the traditional mode will yield to more adaptive modes that only a few ranchers use today. The traditional ways of ranching are adaptive enough for the present to allow men to stay in business, to be better off than most other people in the county and to work in a prestigious occupation.

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APPENDIX

Appendix I

San Miguel County, New Mexico, U. S. A.,
Crop Production and Acres Harvested, including Crop Failure and Fallow Cropland, 1850-1960
(from U.S. Census material, scattered sources)

Year of Census	Total land in farms	Total cropland	Cropland harvested	Cropland failure	Cropland fallow	Wheat harvested	Corn(maize) harvested	Oats harvested	Dry beans harvested	Hay harvested	Number of farms
1850											
acreage	42,880	_____	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
bushels						11,381	33,862	none	none	n.r.	
1860											
acres	170,755	21,550	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
bushels						9,661	88,492	none	1,315	n.r.	
1870											
acres	33,901	20,541	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	211
bushels						13,321	83,145	994	1,413	n.r.	
1880											
acres	36,749	13,036	n.r.	n.r.	n.r.	7,813	7,032	587	n.r.	4,838	622
bushels						87,041	108,490	18,060	2,349	4,384 T	
yield bu/a						11.1	15.4	30.8	n.r.	0.907 T/a	
1890											
acres	84,614	26,906	n.r.	n.r.	n.r.	2,485	3,644	1,620	n.r.	2,473	463
bushels			(20,500+)			21,860	38,459	34,277	870	2,436 T	
yield bu/a						8.80	10.6	22.4	n.r.	0.985 T/a	
1900											
acres	1,004,467	23,531	n.r.	n.r.	n.r.	3,675	4,528	1,858	276	1,587	1,297
bushels			(10,500+)			52,900	65,537	33,195	1,635	2,094	
yield bu/a						14.4	14.5	17.9	5.93	1.32 T/a	
1910											
acres	1,044,726	51,141	n.r.	n.r.	n.r.	2,247	4,979	3,648	299	7,990	1,468
bushels			(18,000+)			33,257	96,010	63,675	3,747	10,228 T	
yield bu/a						14.8	19.3	17.4	12.5	1.28 T/a	
1920											
acres	1,452,379	58,534	n.r.	n.r.	n.r.	2,717	12,862	2,230	5,250	18,626	1,643
bushels			(41,500+)			35,846	161,963	34,585	31,981	21,733	
yield bu/a						13.2	12.6	15.5	6.10	1.17 T/a	

- San Miguel County, New Mexico, U.S.A.

Crop Production and Acres Harvested, including Crop Failure and Fallow Cropland, 1850-1960

Year of Census	Total land in farms	Total Cropland	Cropland harvested	Cropland failure	Cropland fallow	Wheat harvested	Corn harvested	Oats Harvested	Dry beans harvested	Hay harvested	Number of farms
1925											
acres	1,767,957	65,631	47,422	9,709	8,500	4,146	14,427	2,653	13,864 ±	10,112	2,186
bushels				(17.0% fail)		n.r.	n.r.	n.r.	n.r.	n.r.	
yield bu/a									6.7 ?		
1930											
acres	1,908,753	52,026	39,032	3,774	9,220	2,877	8,065	1,523	10,713	9,393	1,670
bushels				(8.96% fail)		39,708	112,091	26,144	91,291	11,935 T	
yield bu/a						13.8	13.9	17.1	8.62	1.27 T/a	
1935											
acres	1,985,804	68,720	10,175	42,114	16,431	905	2,367	394	886	4,432	2,350
bushels				(80.5% fail)		6,632	9,772	3,064	1,531	2,362 T	
yield bu/a						7.33	4.12	7.77	1.73	0.532 T/a	
1940											
acres	1,595,500	58,197	29,586	6,606	22,005	1,277	8,423	940	5,783	8,185	1,482
bushels				(18.3% fail)		13,475	47,379	17,685	17,183	8,753	
yield bu/a						10.6	5.62	18.8	2.98	1.07 T/a	
1945											
acres		59,440	41,178	6,893	7,399	2,267	12,269	7,426	6,412	6,937	1,671
bushels				(14.1% fail)		30,193	187,277	75,219	15,262	9,471	
yield bu/a						13.3	15.2	10.1	2.38	1.37 T/a	
1950											
acres	1,981,861	59,578	21,933	7,811	2,753	2,286	4,385	1,167	2,777	8,702	1,050
bushels				(26.3% fail)		18,770	44,553	25,094	6,407 cwt	12,263 T	
yield bu/a						8.21	10.1	21.4	2.32 cwt/ a.	1.41 T/a	
1955											
acres	1,946,866	51,646	6,663	10,353	1,104	636	976	101	456	3,998	865
bushels				(60.8% fail)		15,703	7,714	1,751	1,196cwt	4,630 T	
yield bu/a						24.7	7.90	17.3	2.54cwt/a	0.952 T/a	
1960											
acres	2,135,512	30,750	9,405	1,245	1,210	495	1,120	270	177	5,848	732
bushels				(11.7%	+3,198 in	9,700	14,270	6,167	378 cwt	6,454 T	
yield bu/a				fail)	soil improv. grasses&leg.	19.6	12.8	22.8	2.14 cwt/ a.	1.12 T/a	

Appendix , Production of Wheat, Corn, and Dry Beans in San Miguel County, N.M., 1950 to 1960

(data from U.S. Census reports)